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ABSTRACT

This is the final report of National Black Health Providers Task Force (NBHPTF) on High Blood Pressure Education and Control. The first chapter of the report recounts the history of the NBHPTF and its objectives. In the second chapter epidemiological evidence is presented to demonstrate the need for a suggested 20 year plan aimed at controlling high blood pressure among black Americans. The third chapter contains recommendations for high blood pressure education and control. This includes an outline of a model high blood pressure control process and commentaries on provider education, community awareness, and community collaborative systems. Chapter four lists recommendations on overcoming barriers to effective high blood pressure education and control. Issues dealt with include health providers' roles, community education, research, nutrition, health education, financing, and physician assistants and nurse practitioners. Appendices contain a summary of provider roles by setting, NBHPTF legislative recommendations, a statement on the social worker's role, legal issues, and acknowledgements. (APM)

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FINAL REPORT OF THE NATIONAL BLACK HEALTH PROVIDERS TASK FORCE ON HIGH BLOOD PRESSURE EDUCATION AND CONTROL

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health
National Heart, Lung, and Blood Institute

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TABLE OF CONTENTS

Page

THE OFFICERS' FOREWORD v

Purpose vii

Membership ix

Provider Organizational Descriptions xiii

CHAPTER I. INTRODUCTION

Background 1

Consensus Building Process/Work Plan 1

CHAPTER II. THE CASE FOR A 20 YEAR EFFORT TO CONTROL HIGH BLOOD PRESSURE AMONG BLACK AMERICANS

Overview 9

Epidemiological Evidence 12

Implications 33

Statement of Approach for the 20 Year Effort 33

CHAPTER III. NBHPTF RECOMMENDATIONS: HIGH BLOOD PRESSURE EDUCATION AND CONTROL SYSTEM

Background 39

Model High Blood Pressure Control Process 40

Commentary on Provider Education 188

Commentary on Community Awareness 189

Commentary on Establishment and Maintenance of Community-Wide Collaborative Systems 190

CHAPTER IV. RECOMMENDATIONS ON RESOLVING BARRIERS TO EFFECTIVE HIGH BLOOD PRESSURE EDUCATION AND CONTROL

Providers' Roles 191

Community Education and Coordination 196

Biomedical and Epidemiological Research Issues 200

Delivery System Issues-Research and Policy Recommendations 206

Nutritional Issues 212

Health Education 217

Behavioral Studies Related to Hypertension 219

Manpower 223

Pediatric High Blood Pressure Issues 235

Financial Barriers 239

Physician Assistants and Nurse Practitioners 245

APPENDIX A -- Summary of Provider Roles by Setting 251

APPENDIX B -- NBHPTF Legislative Recommendations 341

APPENDIX C -- Statement on Social Worker's Role from the National Association of Black Social Workers . 343

APPENDIX D -- Legal Issues 347

APPENDIX E -- Acknowledgements 349

4

THE OFFICERS' FOREWORD

We, the elected officers of the National Black Health Providers Task Force on High Blood Pressure Education and Control (NBHPTF), take this opportunity to offer our comments as a foreword to the Final Report of the Task Force.

For black Americans, the number one health problem is uncontrolled high blood pressure with an estimated 5 million having the problem. This represents one in four blacks as compared with one in six whites. The consequence of this is that in certain age groups, blacks have from three to four times the rate of fatal stroke found in the general population, and high rates of hypertensive and ischemic heart disease. One local study suggested that blacks in one midwestern locality may have experienced up to 18 times the amount of hypertension-related end-stage renal disease as nonblacks.*

Although drug medication has been proven to be effective in controlling high blood pressure and its consequences, current data suggest that at the critical levels of blood pressure over 105 diastolic blacks are not improving relative to the general population. Such data suggest that there is no closure of this gap since the Health and Nutrition Examination Survey (HANES) of 1971-74. Currently, less than 1 percent of the white population is thought to have a diastolic blood pressure over 105, whereas this number approaches 5 percent in black communities.

One of our immediate goals would be to normalize these blood pressure relationships. A concerted effort is needed to identify and begin treatment of black Americans with elevations of 105 diastolic and above. This is in addition to the imperative to identify and promote control among persons with diastolic blood pressures in the 90-104 range.

High blood pressure begins early in blacks causing premature death and disability. For example, age-adjusted stroke death rates between the ages of 35-44 are three to five times higher in the black community than in the general community. This can have a devastating effect on the family and community from which the stroke victim comes. It takes from the community individuals who may be exercising leadership roles, serving as role models for developing youth and contributing to the gross productivity in the black community as well as the country at large.

The real travesty of all of this is that blood pressure can be controlled with medication and lifestyle changes. The regimens which control blood pressure do lead to decreased death and disability from stroke, heart and kidney disease. The CHALLENGE is to STOP unnecessary death and disability.

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*Easterling, "Racial Factors in the Incidence and Causation of End Stage Renal Disease," Transactions of the American Society of Artificial Internal Organs, Vol. 23, P 28-33, 1977.

The National Black Health Providers Task Force was appointed by the National Heart, Lung, and Blood Institute in the fall of 1977 as a response to the problem of uncontrolled high blood pressure in the largest ethnic minority in this country. This task force represented a wide range of health interests in the black community. We are particularly pleased with the commitment, dedication and strong efforts of the task force members and the support from the organizations they represent.

Over an 18-month period, the National black Health Providers Task Force has looked at the roles in blood pressure control of the various health care providers. The approach was one of forward planning to the year 2000 and took into account the facility, manpower, financial, health education and other barriers that may stand in the way of performing successfully these provider roles. Further, it is clear that health care providers, alone, cannot control high blood pressure or many other health related problems in a free standing community. Therefore, during the deliberations of the task force, national level spokespersons representing organizational units in the black community were called upon to explore appropriate supportive roles based on their interests. These organizations, the back bone of the black community, covered such areas as religion, civil rights, fraternities, sororities and unions which must be involved if the goal of community wide blood pressure control is to be achieved.

We are pleased with the effort and believe that it has laid the foundation upon which to build for the future.

Respectfully submitted,

Arthur H. Coleman

Arthur H. Coleman, M.D., J.D.
Chairperson, NBHPTF

Donald R. Ware

Donald R. Ware, M.D., M.P.H.
Co-Chairperson, NBHPTF

Ophelia Long

Ophelia Long, R.N.
Vice Chairperson, NBHPTF

A. Purpose

The use of this report can serve a variety of purposes for different audiences.

Physicians should utilize it: 1) to review the scope of nonmedical and medical functions that are necessary for effective control of high blood pressure and, 2) to examine the roles that may be performed by others under the physician's coordination to assist in attaining such control.

Other health care professionals (e.g., dentists, pharmacists, nurses, podiatrists, optometrists) should utilize this report to review and consider professional activities in which they can engage to aid and abet community-wide high blood pressure control.

Persons involved in the planning and management of large-scale delivery systems (i.e., health maintenance organizations, networks of comprehensive health centers, and institutional health systems) should use this report to identify the framework for planning or modifying systems of HBP service delivery to meet the needs of black Americans.

Health care financing entities should use this report to examine financial barriers, the removal of which should facilitate wider HBP control. The anticipated reduction in the prevalence of the sequelae of high blood pressure related diseases (i.e., stroke, heart disease, renal failure) represents an opportunity to reduce human suffering and, possibly, financial costs.

Business, civil rights, civic, religious, labor and community organizations, foundations, and voluntary associations which serve black communities should use this report to identify those areas of high blood pressure education and control activity which will be enhanced or facilitated by their organizations.

Institutions that are engaged in funding or conducting biomedical, epidemiological, behavioral and health systems research should use this report as an input for their resource planning and priority allocation processes.

This report is not intended to be an academic exercise but rather an action oriented document for health care providers and others who participate in the control of high blood pressure among black Americans.

B. Membership

The membership of the task force included representatives of predominately black health professional associations, representatives of the predominantly black legal association, and the Federal Government's executive and legislative branches. Members included the following (the organizational affiliations and titles used in this membership roster were the positions held by task force members during the active life of the task force):

- **Officers**

Chairperson

Arthur H. Coleman, M.D., J.D.
Past President, National Medical Association
Practicing Physician
San Francisco, California

Vice Chairperson

Ophelia Long, R.N.
First Vice President
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Director, Critical Care Nursing
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Cochairperson

Donald R. Ware, M.D., M.P.H.
Chief, High Blood Pressure
Demonstration Program, DHVD, NHLBI
Medical Advisor
National High Blood Pressure Education Program

- **National Bar Association (NBA)**

James Abernathy II, J.D., Attorney at Law, San Francisco, California

Raymond L. Johnson, J.D., Attorney at Law, Los Angeles, California

Donna Rae Richardson, R.N., J.D., Member, Health Law Committee, American Bar Association; Staff Attorney, Solicitors Office, Occupational Health and Safety Administration, U.S. Department of Labor, Washington, D.C.

- National Black Nurses Association (NBNA)

Ophelia Long, R.N., Vice Chairperson, NBHPTF

Carrie Rogers, R.N., President, NBNA; Director, Comprehensive Health Services of Detroit, Michigan

Lauranne Sams, R.N., Ph.D., Immediate Past President, NBNA; Dean, School of Nursing, Tuskegee Institute, Tuskegee, Alabama

- National Dental Association (NDA)

Francis Davis, D.D.S., Senior Trustee, 1st District, NDA; Chairman, Department of Oral Diagnosis, Radiology and Treatment Planning, School of Dentistry, Farleigh Dickinson University, Hackensack, New Jersey

Harvey Webb, D.D.S., M.P.H., Chairman, National and International Relations Committee, NDA: Director, Constant Care Community Health Center, Baltimore, Maryland

- National Medical Association (NMA)

Arthur Coleman, M.D., J.D., Chairperson, NBHPTF

Charles Curry, M.D., Professor of Medicine, Director, Division of Cardiovascular Diseases, Department of Medicine, Howard University Hospital, Washington, D.C.

Gertrude Hunter, M.D., Chairman, Department of Community Health and Family Practice, Howard University School of Medicine, Washington, D.C.

- National Pharmaceutical Association (NPhA)

Clyde J. Hatch, R.Ph., Regional Director, Zone 5, NPhA; Community Retail Pharmacy, Los Angeles, California

Leonard L. Inge, R.Ph., M.S., Past President, NPhA; Assistant Professor and Director of Continuing Education, College of Pharmacy, Florida A&M University, Tallahassee, Florida

James N. Tyson, M.S., Executive Secretary, NPhA; Assistant Professor, Howard University College of Pharmacy and Pharmacal Sciences, Washington, D.C.

- Student National Dental Association (SNDA)

Marie Holliday, D.M.D., Past President, SNDA; Dentist, Ft. Worth, Texas

- **Student National Medical Association (SNMA)**

Winston H. Griner, M.D., Past Cochairperson, SNMA Committee on Pre-Med Education; Meharray Medical College, Nashville, Tennessee

Eugene Wright, M.D., Past Chairman of the Board of Directors, SNMA; Duke University Medical Center, Durham, North Carolina

- **Student National Pharmaceutical Association (SNPhA)**

Heidi Anderson-Harper, R.Ph., NPhA-SNPhA Liaison Officer; Instructor, Purdue University, West Lafeyette, Indiana

James Fryer, Past Vice President, SNPhA; Pharmacy Student, University of Tennessee, Memphis, Tennessee

- **Legislative Representatives**

Helene Colvin, *Legislative Assistant, Office of the Honorable Paul Tsongas U.S. Senate (Massachusetts)

Millicent Gorham, Coordinator, Congressional black Caucus Health Brain Trust; Legislative Assistant, Office of the Honorable Louis Stokes, U.S. Representative (Ohio)

- **National Heart, Lung, and Blood Institute, NIH, DHEW**

Donald R. Ware, M.D., M.P.H., Cochairperson, NBHPTF

- **Liaison Organizations**

Association of Black Psychologists (ABPsi)
Ruth E.G. King, Ed.D., Past President (ABPsi)

National Optometric Association (N.O.A.)
Raleigh Bynum, O.D., M.P.H., F.A.A.O., Past President, NOA; Chairman, Board of Trustees, N.O.A.

National Podiatry Association
Frank Fields, D.P.M.

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*At the time the task force was organized, Ms. Colvin was a legislative assistant to the Congressional Black Caucus.

- Former Task Force Members

  Yvette Hutchinson, former Legislative Assistant, Office of the Honorable Louis Stokes (Ohio)

  Ralph W. Arline, former Executive Secretary, SNPha; Howard University College of Pharmacy and Pharmacal Sciences

- Staff

  Herbert B. Lassiter, Executive Secretary, NBHPTF; High Blood Pressure Demonstration Program, Division of Heart and Vascular Diseases, NHLBI

  Linda Thigpen Marshall, Public Affairs Advisor, NBHPTF, High Blood Pressure Demonstration Program, Division of Heart and Vascular Diseases, NHLBI

C. Provider Organizational Descriptions

1. National Medical Association

The National Medical Association was founded in October 1895 in Atlanta, Georgia, during the course of the Cotton States and International Exposition in that city. During its first organizational meeting the association pledged to: raise the standards of the medical profession and of medical education; stimulate favorable relationships among all physicians; nurture the growth and diffusion of medical knowledge; sponsor the education of the public concerning all matters affecting the public health; sponsor the enactment of just medical laws; and eliminate religious and racial discrimination from American institutions. Prior to 1950 the organization was composed of physicians, dentists and pharmacists, but by virtue of the House of Delegates action in 1954 the National Medical Association is restricted to physicians.

2. National Dental Association

The National Dental Association was founded in 1918 and has members represented in most of the 50 states. Its goals are the reduction of human suffering from dental disease, the education of the population regarding prevention of the ravages of dental disease and the constant improvement and upgrading of its members' professional competence in cooperation with other health programs and agencies.

3. National Bar Association

The National Bar Association was organized in 1925 to serve some 7,000 to 8,000 black lawyers in this country through its 38 chapters. It was an alternate to the American Bar Association which did not admit blacks until 1950. One of its many objectives is to "Protect civil and political rights of the citizens and residents of the several states of the Untied States."

4. National Black Nurses Association

The National Black Nurses Association was organized in 1971 for the express purposes of unification of black nurses and to pool efforts and resources in consideration of the health status and problems of black people. The idea was an outgrowth of a black nurses' caucus at the 1970 convention of the American Nurses Association in Miami. NBNA has several objectives, two of which are: 1) to define and determine nursing care for black consumers for optimum quality of care by acting as their advocates and 2) to recruit, counsel and assist black persons interested in nursing to ensure a constant procession of blacks in the field.

5. National Pharmaceutical Association

The National Pharmaceutical Association was founded at Howard University in 1947 because black pharmacists were not permitted to join the American Pharmaceutical Association. The National Pharmaceutical Association has chapters throughout the country to serve the 2,500 black pharmacists in the United States. Among its goals are the fostering of the recruitment of black students for pharmacy and improving health care for blacks and the poor through quality pharmacy services.

13

CHAPTER I. INTRODUCTION

A. Background

The National Black Health Providers Task Force on High Blood Pressure Education and Control (NBHPTF) was convened as an integral part of a national effort coordinated by the Federal Government to control high blood pressure in the general population. The National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health (NIH), Department of Health, Education and Welfare (DHEW) has assumed the lead in this Federal effort. The Institute's efforts are coordinated by the National High Blood Pressure Education Program (NHBPEP).

The goal of the NHBPEP is to foster the development of national level hypertension control through awareness and educational interventions. One of its strategies is to support and encourage the activity of private sector organizations whenever possible. The private sector and the NHBPEP have placed considerable emphasis upon provider education and the development of new provider roles in high blood pressure education and control. Of special interest to NHBPEP has been the need to emphasize efforts among black Americans, a population group which has a higher prevalence of high blood pressure than the general population. The NBHPTF is a most recent outgrowth of the aforementioned strategy and emphasis.

B. Consensus Building Process/Work Plan

Before examining the task force's consensus building process, a discussion of the history of the NBHPTF would be appropriate. The evolution of what has become the NBHPTF began with a concern on the part of Dr. Donald R. Ware, medical advisor, NHBPEP. This concern centered around the recognition of high blood pressure as a significant health problem among black Americans and the need to obtain major involvement of black health care professionals in devising strategies for attaining more effective levels of control.

Acting on this concern, Dr. Ware met with the boards and various leaders of three black health care provider organizations to ascertain their interest in becoming more involved as organizations in high blood pressure education and control activities. These discussions produced clear indications that each organization had interest. There was also an expression of the need to define certain interdisciplinary concerns regarding changing roles, professional acceptance of changes and related matters.

Subsequently, an ad hoc committee of representatives from the National Black Nurses Association, National Dental Association, National Medical Association, National Pharmaceutical Association, the Student National Medical Association, the Student National Dental Association and the Student National Pharmaceutical Association met to consider a set of proposed goals and objectives that would be acceptable and productive. At that meeting, it was concluded that a structured interdisciplinary task force would be an appropriate vehicle for mobilizing black provider involvement in devising effective national and community high blood pressure education and control strategies. The inclusion of the National Bar Association and the Congressional Black Caucus was suggested at this time.

The ad hoc committee's conclusions were presented to Dr. Sidney Blumenthal, then acting director of the NHLBI's Division of Heart and Vascular Diseases, (DHVD). Dr. Blumenthal concurred with the need for the task force. Dr. Mary Jane Jesse, upon assuming the directorship of the Division of Heart and Vascular Diseases, added her endorsement of the task force concept. Dr. Robert I. Levy, Director of the National Heart, Lung, and Blood Institute, agreed that the NBHPTF's proposed efforts would be consistent with the NHLBI's interest in involving significant provider and other groups in evolving effective high blood pressure education and control strategies. Dr. Levy approved the NHLBI's role as a sponsor of NBHPTF.

The members of the task force were nominated for NHLBI appointment by the body responsible for policymaking in each of the task force's constituent organizations. The professional organizations were given two representatives, and an alternate. The task force saw the need to involve student representatives and as such student organizations were given one representative and an alternate.

This process of board nominated representation was selected by the ad hoc group over that of interested individual or lone expert selection because of the action oriented nature of the work at hand. The board nominated participants were viewed as being responsible to a constituency which will be called upon to do work in this area. The purpose of the task force was not merely to advise others as to what needed to be done, but for the task force members and their organizations to plan what should be done in the area of high blood pressure education and control and to proceed to implement these plans.

At the summer 1977 meeting of the Congressional Black Caucus, Dr. Thomas Malone, Deputy Director for the NIH, spoke before the Health Brain Trust Section. During his presentation, he announced the formation of the task force and asked for other national organizations interested in participating in the effort to contact the NIH.

The National Black Health Providers Task Force's initial meeting was conducted on the NIH campus in October 1977. Dr. Malone welcomed the members and presented an overview of NIH operations and a review of certain matters relating to minority involvement in NIH's affairs. Dr. Levy presented the NBHPTF with its charge that included a statement of goal and objectives which met the mutual needs and interests of NIH/NHLBI and the organizations participating in NBHPTF. The goal and objectives of the task force were:

GOAL

- To obtain consensus on the role of black health care providers in the detection, treatment, and management of hypertensive patients.

OBJECTIVES

- To list current activity of black health care providers in high blood pressure control.

- To determine the amount and type of feasible interaction and cooperation among black health care providers in high blood pressure control.

- To identify barriers to interaction or cooperation.

- To seek identification of high-risk segments of blacks not being reached by current high blood pressure control efforts.

Dr. Arthur Coleman, a practicing physician in San Francisco and a past president of the National Medical Associaton, was elected chairperson of the task force. Ophelia Long, R.N., director of critical care nursing unit at Kaiser Foundation Hospital, Los Angeles, and a board member of the National Black Nurses Association, was elected vice chairperson. Dr. Donald Ware, the internist representing NHLBI on the task force, was elected cochairperson. Mr. Herbert B. Lassiter, a member of the NHLBI/DHVD staff, was assigned to act as the management advisor for the NBHPTF.

At the first meeting the goal and objectives were reaffirmed. Furthermore, a definition of membership was confirmed. Representation from health care professional organizations to the NHBPTF was based upon the following criteria:

1. The health care professions represented are those professions which are subject to the licensure laws of the several states with regard to diagnosis, treatment and provision of health education to patients.

2. The health care professions represented are those which have continuing contact with hypertensive patients.

3. The provider organizations represented are those having a sufficient number of members and national distribution of these members such that there is the potential for significant impact upon service delivery to black hypertensive patients.

4. The health care professional organizations with membership on the NBHPTF are representative of black providers in each of the identified professions.

Utilizing these criteria, the NBHPTF was constituted to include the National Black Nurses Association (NBNA), the National Dental Association (NDA), the National Medical Association (NMA), and the National Pharmaceutical Association (NPhA). The Student National Dental Association

(SNNA), the Student National Medical Association (SNMA), and the Student National Pharmaceutical Association (SNPhA) were included to provide the initiation of relationships with future practitioners. (It was established that the NBNA would represent black student nursing within its parent structure.)

Representatives of the National Bar Association were included as task force members to provide counsel on certain matters of health law and its relationship to professional role definition. The Congressional Black Caucus, as a member of the task force, provided linkage to those policymaking mechanisms that wish to consider the NBHPTF recommendations from a legislative viewpoint.

The six phase work plan of the task force was developed and approved as follows:

Phase 1 (Autumn 1977)

Obtain updating on current initiatives and funding of NHLBI and private foundations in high blood pressure control.

Obtain updating on available statistical data regarding trends in high blood pressure control.

Obtain updating on available statistical data regarding trends in high blood pressure prevalence and control among blacks. Conduct meeting to organize task force and adopt work program.

Phase 2 (Winter 1977-78)

Identify current formal chapter activity by black health provider organizations in high blood pressure education and control.

Obtain statements from Health Services Administration, Center for Disease Control (Bureau of Health Education), and other Federal agencies, foundations and the heart association, regarding their plans and activities relating to high blood pressure control among black populations.

Phase 3 (Spring/Summer 1978)

Develop tentative alternative positions on feasible interaction and cooperation.

Identify relevant barriers.

Conduct meeting to review tentative positions and barriers.

Develop draft interim report for circulation to constituencies of task force members.

Phase 4 (Summer/Autumn 1978)

Obtain and review comment on the summary of issues addressed by the interim report from organizations represented on the task force.

Develop final proposals for feasible interaction and cooperation.

Circulate proposals among relevant parties.

Solicit and obtain statements from voluntary organizations and consumer-oriented organizations regarding their perspectives on high blood pressure control among blacks.

Conduct meeting to develop consensus on proposals for feasible interaction and cooperation among providers and proposals to overcome barriers to such interaction and cooperation.

Phase 5 (Autumn/Winter 1978-79)

Develop final proposals for overcoming barriers.

Confer on proposals with relevant parties.

Conduct meeting to develop consensus on proposals for overcoming barriers.

Seek identification of high risk segments of the black population not reached by current high blood pressure control efforts.

Confer with facilitator organizations regarding the need for community-wide coordination of high blood pressure education and control.

Phase 6 (Spring/Summer 1979)

Develop final recommendations.

Circulate recommendations to appropriate organizations and individuals for comment.

After the task force had began its deliberations, liaison membership was agreed upon for other national associations representing providers with state licensure, i.e., optometry, podiatry, clinical psychology.

Additional consultation was received from representatives of the National Association of Black Social Workers.

As noted, the first phases of the work plan addressed the need to identify the current and projected role of the Federal and private sectors in blood pressure control.

Next, the roles of the member providers were examined. This examination was by setting, using the top three ambulatory settings as defined by the provider organizations' representatives based primarily on data published by the Congressional Budget Office. Further, a 15-step control process previously defined by the NHBPEP was used as a guide to facilitate discussion (this will be discussed in detail later).

The roles were first examined in an intradisciplinary fashion using consultants to assist in the process. Members of each profession on the task force reviewed the detailed roles that might be played by its profession in each of several settings. Later, the roles were examined in an interdisciplinary manner. Interdisciplinary teams organized by setting met to examine all of the professional roles applicable to that setting.

The full range of roles were reviewed by the entire membership of the task force. The interim report which contained the suggested roles developed by the task force was circulated to the boards of the participating provider organizations. These boards expressed concurrence with the suggested roles. The willingness of these boards to concur with their members following these roles established a national organizational policy. However, the practice may have been quite different.

The provider organizations performed an inventory of chapter high blood pressure control activities and a random sampling of opinion from individual providers. Data from these sources were used by the task force in its final review of the proposed roles. Had there been a serious and irreconcilable divergence between the provider roles as recommended by the task force and accepted by the boards of the provider organizations and the practices and beliefs of the practicing providers, a further investigation into the practical problems of implementing the role recommendations would have been necessary.

If there appeared to be a convergence of viewpoints at the policy and practice levels, the implementation tasks could be viewed as being more manageable.

The feedback received from the provider organizations persuaded the task force that its role recommendations, while forward looking, were not discordant with the practices and beliefs of practicing providers.

The task force members felt that strategies could be developed to increase the degree of convergence between its role recommendations and provider behavior.

In addition to the provider roles, the task force was quite cognizant of the absolute need for the active involvement of the existing nonhealth organizational units that have outreach and communication linkages in the black community.

Accordingly, meetings were held with representatives of such organizations as AME Church, CME Church, National Office of Black Catholics, World Community of Islam in the West, NAACP, National Council of Negro Women, National Urban League, Pan Hellenic Council and the Masonic Organizations. Each organization expressed its interest in this problem and was asked to develop a capability statement as to its possible role in blood pressure control in the black community. These statements provided one of the bases for the task force's recommendations on community education and coordination.

In conclusion, the following may be said about the consensus building process:

1. The resultant product represents a consensus among health providers about their respective roles in hypertension control and education.

2. The final recommendations are not subjective, but represent the collaborative effort of physicians, nurses, pharmacists, dentists, podiatrists, and optometrists with expert support from legal and legislative advisors.

3. This particular type of task force demonstrates a useful mechanism that may be used to promote change among health professionals.

4. This task force defined its respective roles rather than having them defined by an external group.

In addition to the consensus development among the provider organizations, the task force had the benefit of consultations from certain faculty and staff members of Meharry Medical College and the Matthew Walker Community Health Center in Memphis, Tennessee. These perspectives in addition to those of faculty members of the Howard University Medical School who were on the task force provided necessary input from the two institutions which have trained most of the Nation's black health professionals.

CHAPTER II. THE CASE FOR A 20-YEAR EFFORT TO CONTROL HIGH BLOOD PRESSURE AMONG BLACK AMERICANS

A. Overview

The seriousness of high blood pressure as a major health problem has been documented by a number of landmark studies and analyses. In the monograph, Medical Basis for Comprehensive Community Hypertension Control Programs,* published by DHEW's NHLBI, the issue was summarized as follows:

> "...despite the limitations of cause-specific mortality data, the objective of total mortality as an epidemiologic endpoint and the strength of its association with blood pressure leaves no doubt that blood pressure elevation is of major importance as a precursor of death..."

This viewpoint is confirmed by actuarial data from the 1959 study of the Society of Actuaries.** This study showed that the probability of death increased dramatically with an increase in blood pressure. The reader should note that in exhibit 1 (prepared from the study) a diastolic pressure of 98-102 mm Hg presents a mortality ratio of 234 (a standard risk equals 100). Thus, a person with this diastolic blood pressure could be expected to have a 134 percent greater risk of death within a given year than a person with a diastolic pressure in the 80 mm Hg range.

Preliminary data from the 1979 Build and Blood Pressure Study of the Association of Life Insurance Medical Directors and the Society of Actuaries*** (a 16 year study) present confirmation of the 1959 study and several important additional statistical findings which were stated by the study's sponsors as follows: "Ignoring 'mild' elevation in blood pressure--readings as low as 138/88--is a common and sometimes fatal error." Exhibit 1a, taken from the sponsors' study, indicates that diastolic pressures which are as low as 88 mm Hg to 92 mm Hg present men with a 38 percent greater chance of death than is normal and women with a 33 percent greater chance.

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* Borhani, N.O. (Ed.), Medical Basis for Comprehensive Community Hypertension Control Programs, DHEW (NIH) 75-715, p.7.

** Build and Blood Pressure Study, 1959, Vol. I, Society of Actuaries, Chicago, Peter F. Mallon, Inc., Long Island, N.Y., October 1959.

***Association of Life Insurance Medical Directors of America and Society of Actuaries; Background Information on 1979 Build and Blood Pressure Study; Society of Actuaries, April 1979.

Exhibit 1. Relationship between mortality and blood pressure among insured population (Society of Actuaries, Chicago, Illinois 1959)*

Blood Pressure Levels in mm Hg	Mortality ratio as percent of standard		
	Mean	Standard deviation	Number of deaths
		Systolic blood pressure	
128 - 137	118	± 0.7	29,355
138 - 147	155	± 1.2	17,252
148 - 157	194	± 3.3	3,512
158 - 167	244	± 8.8	774
		Diastolic blood pressure	
83 - 87	129	± 1.0	15,901
88 - 92	150	± 1.4	12,253
93 - 97	188	± 3.6	2,767
98 - 102	234	± 8.0	856
		Systolic-Diastolic Combinations	
128 - 137 systolic			
83 - 87 diastolic	127	± 1.5	7,491
88 - 92 diastolic	140	± 2.0	4,688
93 - 97 diastolic	168	± 7.1	561
138 - 147 systolic			
83 - 87 diastolic	153	± 2.3	4,502
88 - 92 diastolic	170	± 2.4	5,142
93 - 97 diastolic	199	± 5.6	1,278
148 - 157 systolic			
99 - 92	191	± 5.9	1,063
93 - 97	224	± 8.6	683
98 - 102	269	± 14.9	324

* Stamler, Jeremiah, Stamler, Rose, Pullman, Theodore N. (eds.) The Epidemiology of Hypertension. New York & London: Grune & Stratton, 1979, p. 395, as adapted from Build and Blood Pressure Study, 1959.

Exhibit 1a. Increased mortality for insured men and women with rise in blood pressure

A. If your systolic pressure is:

Your chance of death compared to normal is:	138-147 mm	148-157 mm	158-167 mm	168-177 mm
	Male/Female	Male/Female	Male/Female	Male/Female
1959 Build and Blood Pressure Study	55% 22% higher	94% 40% higher	144% 130% higher	* * higher
1979 Build and Blood Pressure Study	36% 22% higher	68% 35% higher	110% 67% higher	124% * higher

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B. If your diastolic pressure is:

Your chance of death compared to normal is:	88- 92 mm	93- 97 mm	98-102 mm	103-108 mm
	Male/Female	Male/Female	Male/Female	Male/Female
1959 Build and Blood Pressure Study	50% 22% higher	88% 68% higher	134% 118% higher	162% * higher
1979 Build and Blood Pressure Study	38% 33% higher	71% 63% higher	104% 83% higher	164% * higher

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* Too few cases for analysis

NOTE: The 1959 Build and Blood Pressure Study reflects the mortality experience among insured lives covering the years 1936 through 1954; the 1979 Build and Blood Pressure Study reflects provisional experience among insured lives covering the years 1954 through 1972.

SOURCE: Ad Hoc Committee of the New Build and Blood Study, Association of Life Insurance Medical Directors of America and Society of Actuaries.

In the diastolic range of 103-108 mm Hg, the Life Insurance Study notes a 164 percent greater chance of death among males. This observation will be shown to have special relevance to blacks in that a number of studies have shown blacks to be overrepresented at the higher elevations.

B. Epidemiological Evidence

1. Landmark Studies

The landmark Framingham Studies* have provided epidemiological evidence of the linkage between elevated blood pressures and certain cardiovascular diseases and stroke.

The Framingham Studies represented a multiyear effort to examine the relationship between certain cardiovascular, cerebrovascular and other disease entities and health conditions and certain mortality and morbidity indices. These community-wide studies conducted in Framingham, Massachusetts, identified significant correlations between high blood pressure and the risk of cardiovascular and cerebrovascular diseases.

These findings were of interest in identifying certain risk factors especially with regard to the white population, which was the predominant characteristic of the Framingham Study's population. For the purposes of the NBHPTF, data on a more heavily black population were considered to be essential for assessing the epidemiological evidence's applicability to black Americans.

The Evans County, Georgia, study of cerebrovascular diseases in a biracial population presented findings regarding the correlation of high blood pressure and stroke and ischemic heart disease for blacks as well as whites.**

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* The reader is referred to the following reports for more detailed discussions of these studies:

1. Kannel, W.B., Schwartz, M.J., and McNamara, P.M.: Blood Pressure and Risk of Coronary Artery Disease: The Framingham Study, Dis. Chest 56:3-52, 1969.
2. Kannel, W.B., Wolf, P.A., Verter, J., and McNamara, P.M.: Epidemiologic Assessment of the Role of Blood Pressure in Stroke: The Framingham Study, JAMA 214:301-310, 1970.
3. Kannel, W.B., et al.: Role of Blood Pressure in the Development of Congestive Heart Failure: The Framingham Study, N. Engl. J. Med. 287:781-787, 1972.

**Herman, Albert, et al.: Cerebrovascular Disease in the Biracial Population of Evans County, Georgia. Archives of Internal Medicine Dec, 1971, Vol. 128:6, page 949-955.

The Evans County, Georgia, study findings punctured any historical speculation which may have been extant that the greater prevalence of high blood pressure among blacks was explicable in terms of a greater tolerance of the condition by blacks.

The Evans County, Georgia, study depicted high blood pressure as a serious risk factor for blacks just as Framingham had depicted this phenomenon for whites.

The Framingham and Evans County findings provided the NBHPTF with the conceptual framework for examining nationwide data to ascertain if the concept of high blood pressure as an important risk factor was sustainable on a national scale for blacks.

2. National Data

The NBHPTF reviewed epidemiological evidence supplied by the NHLBI of the profound implications of high blood pressure for black Americans. The following statements indicate the gravity of the situation as reported in various U.S. Government supported surveys.

a. The prevalence of high blood pressure among blacks is 66 percent greater than that found among whites. As reported by the 1971-74 Health and Nutrition Examination Survey of the National Center for Health Statistics, an estimated 17 percent of the white population had definite high blood pressure (i.e., systolic blood pressure of at least 160 mm Hg or diastolic blood pressure of at least 95 mm Hg) compared to a staggering 28.2 percent for black Americans. Exhibits 2 and 3 present graphic and tabular representations of this phenomenon.

b. The HANES study demonstrated also that the distribution of elevations in the black American population were significantly greater among black Americans than among white Americans. In addition, data from random probability household samplings in three states with sizable black populations showed, in 1979, that blacks continued to be overrepresented in the higher elevations (105 mm Hg diastolic and above) with no relative progress against the white experience.* The task force believes that an extraordinary effort is required to attain parity among the races in high blood pressure control.

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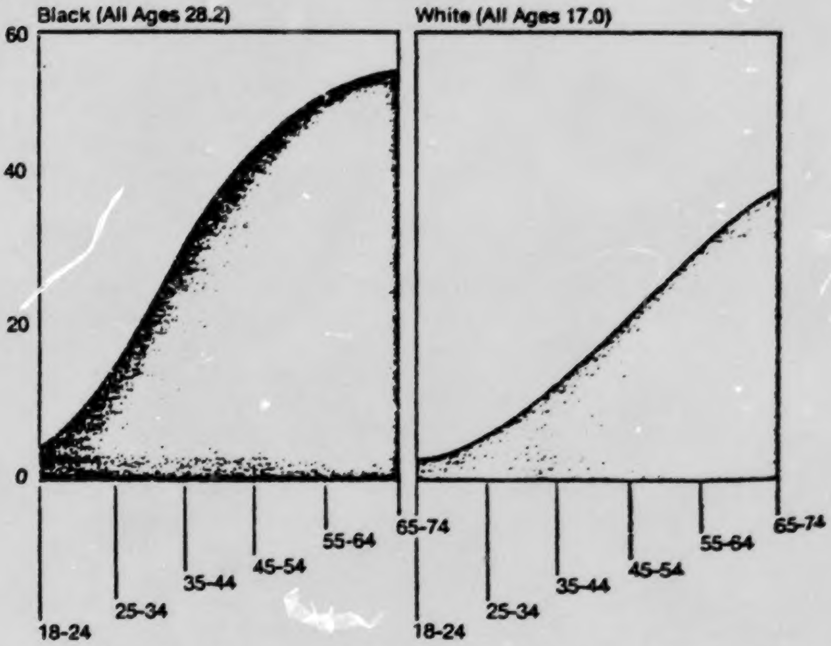
* Private Communication from Dr. Donald Ware to Dr. Robert Levy, Director, NHLBI.

Exhibit 2. Prevalence rates of definite hypertension among white and black persons 18-74 years of age, U.S., 1971-1974

(Prevalence rate per 100 persons)



[1] Systolic blood pressure of at least 160 mm Hg or diastolic blood pressure of at least 95 mm Hg.

SOURCE: U.S. PHS, National Center for Health Statistics, Vital and Health Statistics, No. 1, Table 40, Series 11 #203, September 1977.

Exhibit 3. Prevalence rates of definite hypertension among white and black persons 18-74 years by age and sex, with standard errors and proportion with this condition not previously diagnosed: United States, 1971-74

Condition and age	White						Black					
	Both sexes		Men		Women		Both sexes		Men		Women	
	Rate per 100 population	Standard error of rate	Rate per 100 population	Standard error of rate	Rate per 100 population	Standard error of rate	Rate per 100 population	Standard error of rate	Rate per 100 population	Standard error of rate	Rate per 100 population	Standard error of rate
Definite Hypertension, Total[1]	17.0	0.57	18.5	0.84	15.7	0.72	28.2	1.75	27.8	2.33	28.6	2.28
18–24 years	3.1	0.65	4.9	1.29	1.4	0.30	3.7	1.06	4.6	1.77	2.9	1.06
25–34 years	5.8	0.65	8.2	1.28	3.7	0.57	13.7	2.86	17.7	5.98	10.2	1.95
35–44 years	13.6	1.09	17.3	1.97	10.1	0.94	32.0	3.85	38.2	6.55	28.3	4.71
45–54 years	22.2	1.59	25.8	2.06	18.9	1.86	44.0	6.31	36.8	7.95	50.9	7.69
55–64 years	31.4	1.59	31.1	2.14	31.7	2.02	52.6	[illegible]	49.9	7.86	54.5	7.11
65–74 years	39.3	1.72	35.3	1.85	42.3	8.26	55.1	3.87	50.1	4.28	58.8	4.73
Definite Hypertension not Previously Diagnosed, Total[2]	56.6	1.51	64.8	2.00	48.2	1.86	47.2	3.87	54.9	5.13	41.2	4.66
18–24 years	66.9	10.86	67.0	13.68	66.4	12.00	78.1	8.91	90.4	16.94	62.6	18.33
25–34 years	69.1	6.02	71.1	8.84	65.0	6.67	54.0	11.52	62.0	18.35	57.0	12.55
35–44 years	63.3	4.02	66.8	6.48	57.5	4.57	39.8	4.94	[illegible]	8.82	40.8	6.79
45–54 years	61.9	3.22	64.3	3.74	58.9	4.71	55.6	8.45	71.0	10.26	44.3	10.03
55–64 years	50.4	3.18	62.1	4.34	39.9	4.71	39.2	7.35	48.9	12.99	33.0	8.36
65–74 years	49.2	1.95	61.9	2.32	41.2	2.56	43.7	4.67	51.0	4.70	39.1	5.58

[1] Systolic blood pressure of at least 160 mm. Hg or diastolic blood pressure of at least 95 mm. Hg.

[2] Proportion of persons with definite hypertension, as defined in footnote 1, who have never been told by their doctors that they had high blood pressure. Standard error of proportions and population estimates.

NOTE: There are an estimated 19.4 million white persons at ages 18–74 years out of 113.9 million and 3.7 million black persons at ages 18–74 years out of 13.0 million that have definite hypertension as defined in footnote 1.

SOURCE: U.S. PHS, National Center for Health Statistics, Vital and Health Statistics, Series 11.

Exhibit 4. Age-adjusted death rates for selected causes by race, U.S. 1976 (Rates per 100,000 population in specified group)

		White	Racial Minorities
	Total Both Sexes	Total Both Sexes	Total Both Sexes
All causes	627.5	599.9	833.7
Major cardiovascular diseases	284.4	277.8	337.2
Diseases of heart	216.7	213.5	241.1
Active rheumatic fever and chronic rheumatic heart disease	4.7	4.7	4.4
Hypertensive heart disease	2.0	1.7	5.3
Hypertensive heart and renal disease	1.0	0.9	2.1
Ischemic heart disease	191.6	190.6	196.9
Acute Myocardial infarction	102.9	104.6	85.2
Other acute and subacute forms of ischemic heart disease	1.3	1.3	2.1
Chronic ischemic heart disease	87.3	84.7	109.6
Angina pectoris	0.1	0.1	0.1
Chronic disease of endocardium and other myocardial insufficiency	1.3	1.2	1.8
All other forms of heart disease	16.1	14.3	30.5
Hypertension	1.8	1.4	4.7
Cerebrovascular diseases	51.4	48.5	77.6
Cerebral hemorrhage	8.0	7.2	14.7
Cerebral thrombosis	11.4	11.0	14.3
Cerebral embolism	0.2	0.2	0.2
All other cerebrovascular diseases	31.8	30.0	48.4
Arteriosclerosis	6.4	6.5	5.7
Other diseases of arteries, arterioles, and capillaries	8.0	8.0	8.1

SOURCE: Monthly Vital Statistics Report, Final Mortality Statistics, 1976, National Center for Health Statistics, PHS, DHEW, March 30, 1978.

Exhibit 5. Color ratios (nonwhite/white) of death rates for stroke, male and female, by age, U.S. 1973-1975

Age	Male 1973	Male 1974	Male 1975	Female 1973	Female 1974	Female 1975
Total	1.05	1.02	1.02	0.88	0.84	0.83
Less than 1	2.28	2.91	1.79	2.11	2.91	2.25
1 - 4	1.89	1.63	1.33	1.30	1.43	1.14
5 - 14	1.60	1.00	1.20	1.50	1.00	1.60
15 - 24	2.17	1.77	1.71	1.92	1.50	1.73
25 - 34	3.63	3.37	3.35	2.97	2.97	2.60
35 - 44	4.32	3.62	3.86	3.84	3.13	3.03
45 - 54	3.55	3.38	2.52	3.33	3.18	3.00
55 - 64	2.65	2.60	2.52	3.04	2.91	2.78
65 - 74	1.71	1.70	1.69	2.18	2.11	2.02
75 - 84	0.96	0.95	1.01	1.05	1.03	1.09
85 +	0.68	0.66	0.62	0.65	0.65	0.62
Age-adjusted	1.61	1.56	1.56	1.72	1.65	1.63

SOURCE: Epidemiology and Biometry Program, Division of Heart and Vascular Diseases, NHLBI, NIH.

Exhibit 6. Color ratios (nonwhite/white) of death rates for ischemic heart disease, male and female, by age, U.S. 1973-1975

Age	Male			Female		
	1973	1974	1975	1973	1974	1975
Total	0.65	6.64	0.63	0.70	0.67	0.66
Less than 1	2.56	0.80	--	1.14	1.33	4.00
1 - 4	--	--	2.00	1.00	--	--
5 - 14	2.00	0.00	0.00	1.00	1.00	0.00
15 - 24	2.17	1.60	2.20	4.50	4.00	2.00
25 - 34	2.13	2.25	2.08	3.21	3.82	3.64
35 - 44	1.37	1.38	1.46	3.51	3.39	3.07
45 - 54	1.20	1.17	1.15	2.82	2.77	2.48
55 - 64	1.04	1.04	1.00	2.01	1.97	1.96
65 - 74	0.93	0.93	0.89	1.48	1.43	1.38
75 - 84	0.72	0.72	0.73	0.85	0.84	0.86
85 +	0.57	0.57	0.54	0.62	0.60	0.56
Age-adjusted	0.93	0.93	0.91	1.32	1.28	1.26

SOURCE: Epidemiology and Biometry Program, Division of Heart and Vascular Diseases, NHLBI, NIH.

Exhibit 7. Color ratios (nonwhite/white) of death rates for hypertensive disease, male and female, by age, U.S. 1973-1975

Age	Male			Female		
	1973	1974	1975	1973	1974	1975
Total	1.88	1.80	1.91	1.58	1.57	1.52
Less than 1	4.00	--	--	--	4.00	--
1 - 3	--	--	--	1.00	--	--
5 - 14	--	--	0.00	--	--	--
15 - 24	5.00	2.00	0.00	--	0.00	0.00
25 - 34	15.50	11.00	15.00	15.00	9.00	11.00
35 - 44	9.18	10.67	10.67	9.22	10.14	7.14
45 - 54	5.83	6.08	5.85	8.48	7.63	8.55
55 - 64	4.94	4.31	4.39	5.52	5.67	5.89
65 - 74	2.81	2.71	2.83	3.66	3.92	3.33
75 - 84	1.45	1.52	1.65	1.56	1.59	1.60
85 +	0.88	0.90	0.87	0.76	0.88	0.96
Age-adjusted	2.90	2.82	3.02	3.26	3.24	3.13

SOURCE: Epidemiology and Biometry Program, Division of Heart and Vascular Diseases, NHLBI, NIH.

c. Among blacks who are at or near the poverty line but not covered by Medicaid, the situation was worse as illustrated by the following. The data on persons with severe high blood pressure (115 mm Hg diastolic and above) and the statistical inferences with regard to the greater risks of black populations are underscored by the projections of B. Frank Polk, M.D., M.Sc., of the Harvard Medical School faculty.* Dr. Polk utilizing Census Bureau data and extrapolations of estimates derived from the NHLBI-sponsored Hypertension Detection and Followup Program, has estimated that among the medically indigent (a most vulnerable category in terms of limited financial access to high blood pressure control services) blacks have:

1) high prevalence of severe high blood pressure (115 mm Hg diastolic and above), and

2) larger absolute numbers of uncontrolled severe hypertensives among the medically indigent.

d. Mortality from certain sequelae of high blood pressure (stroke and hypertensive heart disease) is significantly greater among nonwhite Americans than among white Americans.

Age-adjusted death rates for 1976 published by the National Center for Health Statistics show nonwhite death rates (black = 87 percent of nonwhites) from cerebrovascular diseases as being 62 percent greater than death rates among white Americans. The hypertensive heart disease death rate was approximately 317 percent greater in nonwhites than whites. In the age groups that tend to have persons with family responsibilities and with midlife earning capacity, the nonwhite males had between 3.62 and 4.22 times the number of deaths from stroke as did white males in the 35-44 age group during the years 1973-1975. Nonwhite females fared little better with death rates from 3.03 to 3.84 times that of white females in the 35-44 age group. See exhibit 5 for more detail.

Death rates from hypertensive heart disease were as great as 15 times more for nonwhites than for whites in the 25-34 age group. Ischemic heart disease death rates for nonwhite males were at least 1.37 times the death rate for white males and for nonwhite females over three times the rate for white females. See exhibits 6 and 7 for details.

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* Private Communication from Dr. B. Frank Polk to Drs. Gerald Payne and Donald Ware, NHLBI.

e. Stroke morbidity for nonwhites has been substantially greater than that for whites, with the events tending to occur at earlier years. See exhibit 8 for details.

3. Scientific Progress - The Availability of Efficacious Treatment

The data presented in the previous sections demonstrated to the NBHPTF the seriousness of high blood pressure as a significant risk factor for cardiovascular, cerebrovascular and renal disease. The data provided evidence also of the disproportionally high prevalence of high blood pressure among black Americans and the dramatic toll of its sequelae, especially stroke, among the Nation's black citizenry. See exhibit 9 for details on stroke mortality.

Two issues then became paramount:

- Are generally efficacious therapies available for the control of high blood pressure?

- Are such therapies effective among blacks?

The Veterans Administration Study (VA Study)* organized by Dr. Freis and his colleagues demonstrated the efficacy of antihypertensive drug therapy. Persons with sustained diastolic blood pressure of 115-129 mm Hg who received active drug therapy achieved reductions in 90 percent of the cases. Persons in the VA study with initial diastolic readings of 115-129 mm Hg who received placebo therapy achieved blood pressure reductions in less than 35 percent of the cases. And, indeed, these reductions among the placebo group were significantly less than for those persons in the active drug group. Exhibit 10 presents summaries of these data.

Among persons with initial diastolic readings of 90-114 mm Hg, over 85 percent of the experimental group achieved reductions in diastolic readings while only 30 percent of the control group achieved reductions. (See exhibit 11 for more details.)

The VA Study, according to some medical authorities, does not answer the question whether the blood pressure reduction per se or the taking of the antihypertensive medication itself was the causal factor in reducing morbid and mortal events.

However, there is a dramatic comparison of mortality and morbidity between the treated and control groups. The contrast was most distinct in the patients with diastolic pressures of 115-129 mm Hg. There were deaths in 5.7 percent of the control group compared with none in the treated group. Other indicators showed equally dramatic differences. (See exhibit 12 for details.) These data appeared to provide substantial evidence as to the availability of efficacious treatment.

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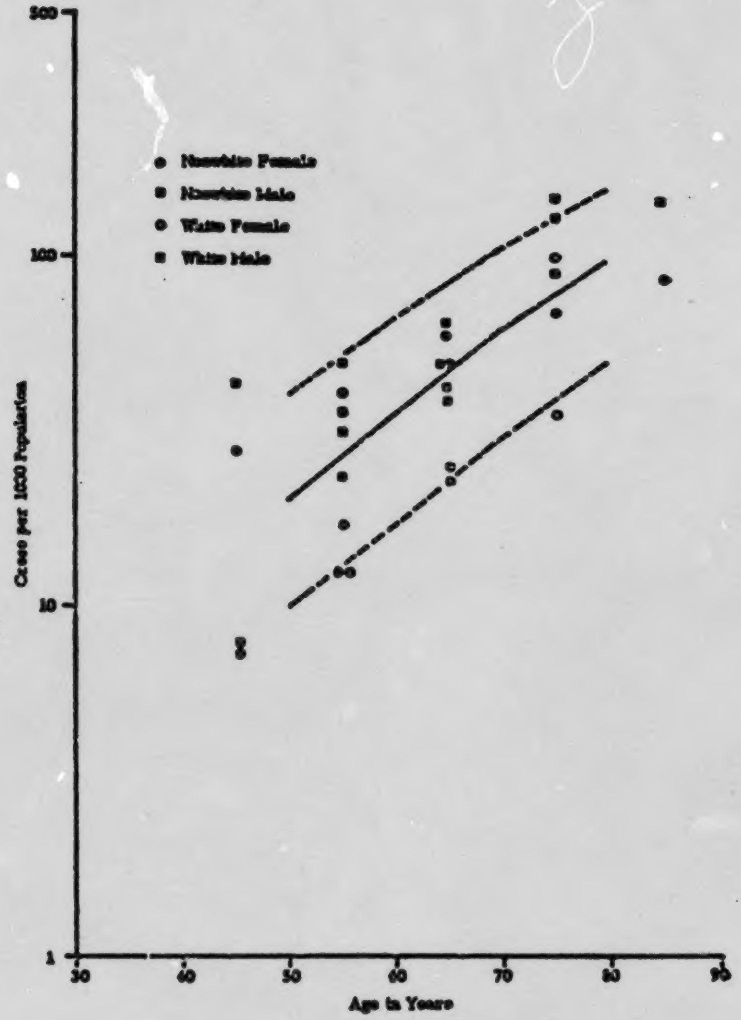
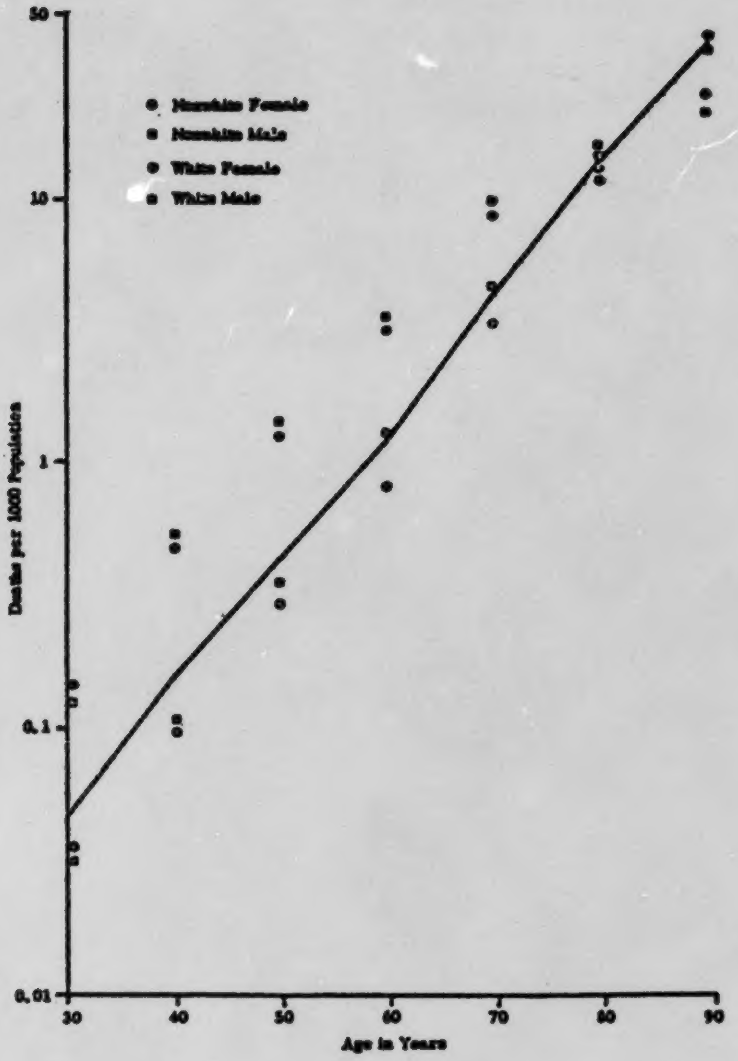
* JAMA, Vol. 213, 1970

Exhibit 8. Prevalence of stroke cases per 1,000 population, drawn from selected research publications



SOURCE: Report of the Joint Committee for Stroke Facilities, I. Epidemiology for Stroke Facilities Planning, Stroke, Vol. 3, May-June 1972.

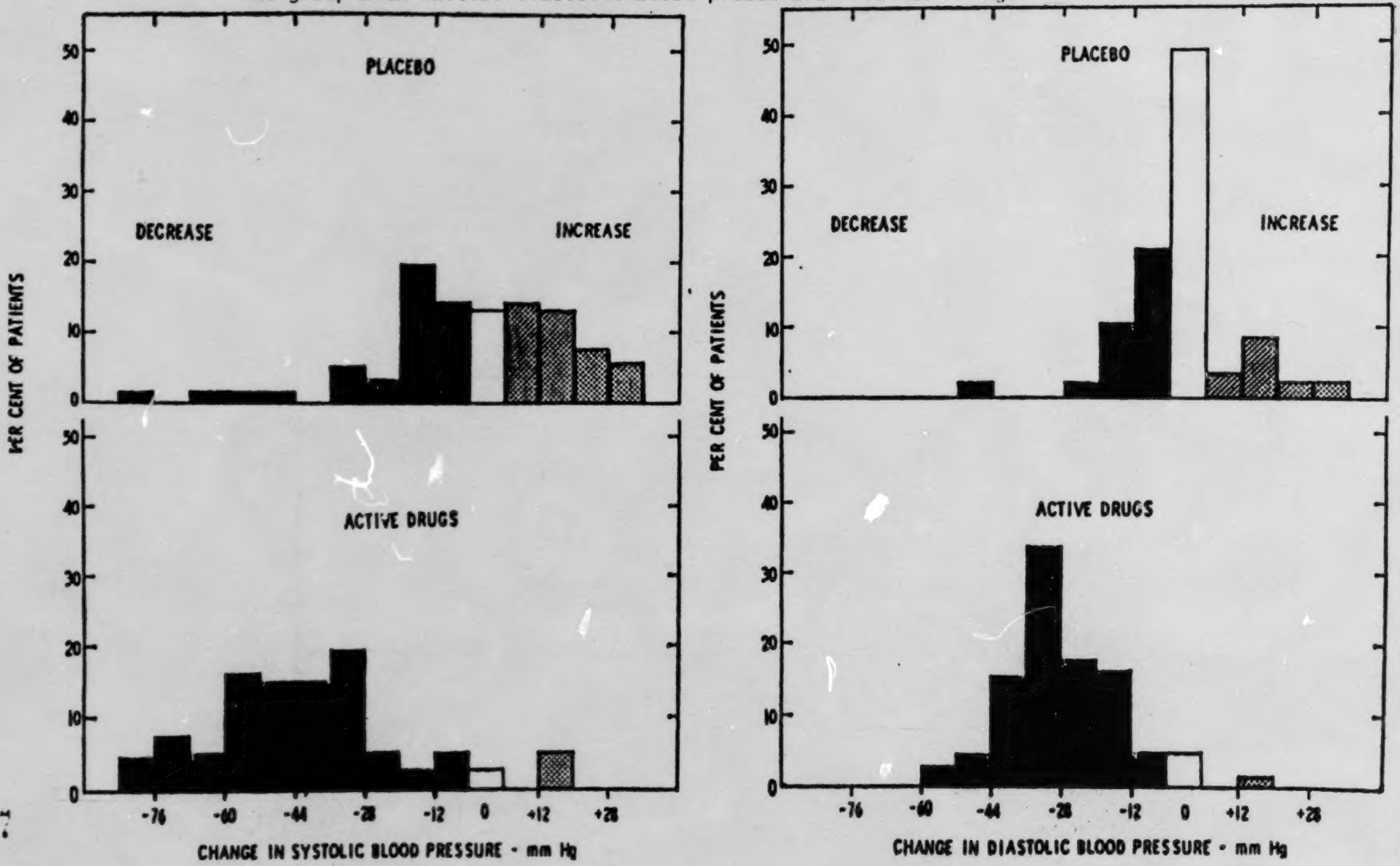
Exhibit 9. Deaths attributed to stroke per 1,000 population by sex and race for the United States, 1966



SOURCE: Report of the Joint Committee for Stroke Facilities, I. Epidemiology for Stroke Facilities Planning, Stroke, Vol. 3, May-June 1972.

Exhibit 10. Changes in systolic (left) and diastolic blood pressure (right) after four months of treatment in 57 patients given placebos (above) and 68 patients treated with hydrochlorothiazide plus reserpine plus hydralazine (below)

The group with initial diastolic blood pressure of 115-129 mm Hg.



SOURCE: JAMA, Vol. 202, 1967

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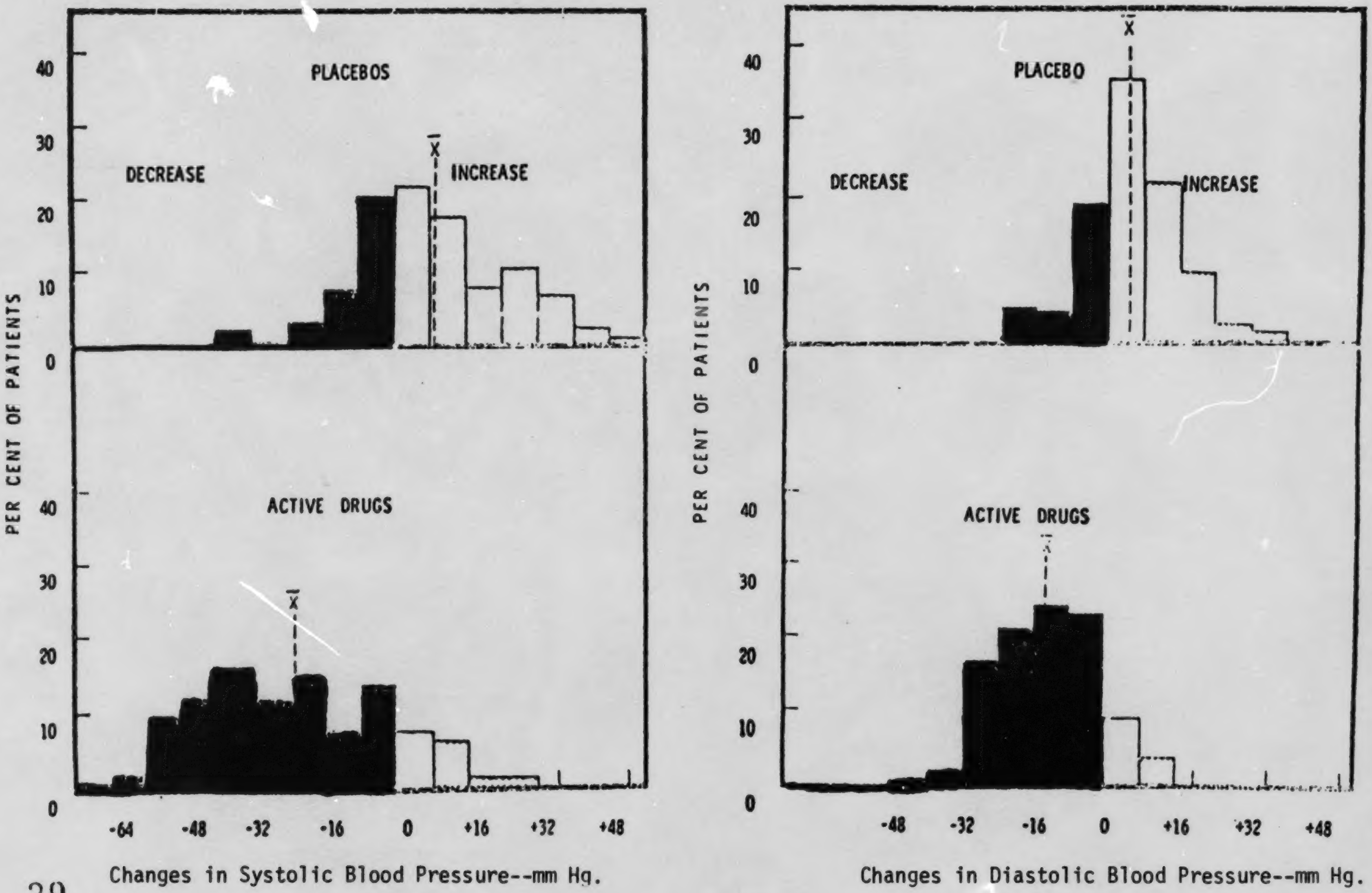
Exhibit 11. Changes in systolic (left) and diastolic blood pressure (right) after four months of treatment in patients given placebos (top) and in patients treated with active drugs (bottom)

The group with initial diastolic blood pressure of 90-114 mm Hg.



SOURCE: JAMA, Vol. 213, 1970

Exhibit 12. Summary of results of the Veterans Administration cooperative study

	Diastolic Pressure 90-114				Diastolic Pressure 115-129			
	Control Group		Treated Group		Control Group		Treated Group	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Terminating morbid events								
Death	19	9.8	8	4.3	4	5.7	0	-
Class A events	9	4.6	0	-	10	14.3	0	-
Treatment failures	7	3.6	1	0.5	7	10.0	1	1.4
Nonterminating events (Class B)	21	10.8	13	7.0	6	8.6	1	1.4
Termination due to blood pressure	20	10.3	0	-	2	2.9	0	-
Free of all assessable events	118	60.8	164	88.2	41	58.6	71	97.3
Total study group	194	99.9	186	100.0	70	100.1	73	100.1

SOURCE: Adapted from Freis, et al., JAMA, Vol. 213, No. 7, August 17, 1970.
JAMA, Vol 202, No. 11, December 11, 1967.

Exhibit 13. Incidence of morbid events with respect to age and race

	Control Group			Treated group			
		Patients with "morbid event"			Patients with "morbid event"		%
Age (on admission)	Patients Randomized	No.	%	Patients Randomized	No.	%	Effectiveness
Less than 50	99	15	15.2	102	7	6.9	55
Over 50	95	41	43.2	84	15	17.9	59
Total:	194	56		186	22		
Race							
Negro	81	21	25.9	76	8	10.5	54
Other	113	35	31.0	110	14	12.7	59
Total:	194	56		185	22		

SOURCE: Veterans Administration Cooperative Study Group on Antihypertensive Agents, Effects of Treatment on Morbidity in Hypertension, JAMA, Aug. 17, 1970, Vol. 213, No. 7.

With regard to the applicability of such treatment to blacks, the VA Study showed comparable results with a computed percent of effectiveness of 54 percent for blacks and 59 percent for whites and others. (See exhibit 13.)

In the treated group, blacks had slightly fewer morbid events (10.5 percent of black patients) than did whites and others (12.7 percent).

These and other data resolved the issue of the applicability of antihypertensive drug regimens to blacks. Blacks fared as well as whites in the observed benefits.

4. Professional Practice Progress - The Spreading Utilization of Efficacious Treatment

The establishment of the efficaciousness of antihypertensive drug therapy for the treatment of high blood pressure and the linkage of such treatment to the reduction in certain morbid and mortal events were significant scientific milestones.

As important as these milestones may have been, they did not appear to trigger widespread control efforts among providers and patients. For example, despite the introduction of thiazide diuretics as early as 1953 and of other antihypertensive drugs in the early 1960's, and the impressive clinical trials of Dr. Freis' group at the Veterans Administration, the awareness and control levels of 1971 were only slightly changed from 1962.

For these 2 years, the Health and Nutrition Examination Surveys showed the following estimates among persons with definite hypertension (95 mm Hg diastolic and above).

Status	1962	1971
Not aware	44%	49.1%
Adequate Control	16%	17%
Inadequate Therapy	18%	20%
Aware, No Therapy	21%	11%

The availability of the scientific knowledge was not the issue in 1971. The dissemination, acceptance and utilization of such knowledge among providers and the public was the issue. Thus, in 1972, the National High Blood Pressure Education Program was launched to address this issue. This program, coordinated by NHLBI and including the participation of many voluntary organizations, health care societies, Governmental agencies and others, has appeared to accelerate the dissemination of HBP knowledge and the acceptance of the importance of HBP control throughout the general provider and patient publics.

Although direct causality may be difficult to demonstrate, there has been a striking temporal relation between the education program's efforts and certain key indicators.

For example, in April of 1978, Dr. Robert I. Levy, Director for the NHLBI, was able to report the following trends to the Fourth Annual National Conference on High Blood Pressure Control.

a. The estimated percentage of hypertensives who were aware of their condition had increased from 51 percent in 1971 to 71 percent in 1974.

b. The estimated patient visits for high blood pressure had increased by 48.5 percent between 1972 and 1976 while visits for all causes increased but 4.9 percent during the same period.

In late 1978, the Food and Drug Administration was able to report that a significant percentage of the 2,968 physicians surveyed held opinions about treating high blood pressure which agreed in principle with the basic approaches of the NHLBI-sponsored Joint National Committee on the Detection, Evaluation and Treatment of High Blood Pressure.*

Was the desired result of decreased mortality from the sequelae of high blood pressure being achieved as a result of increased public awareness, increased patient visits for HBP, and a seeming convergence in the views of research oriented biomedical authorities and the practicing physicians? Some answers have been suggested. Speaking to the members of the task force, on February 23, 1979, Dr. Robert I. Levy, Director, NHLBI, was able to report dramatic decline in deaths caused by stroke. Dr. Levy was quoted as stating "that since 1972, stroke deaths have been declining at an amazing rate, greater than five percent per year."** Sharing with the NBHPTF an earlier editorial written by him for the distinguished New England Journal of Medicine, Dr. Levy reported on stroke deaths that "the 18.5 percent fall in non-white females 35-74 years of age over the period 1960-75 represents a fundamental change in the pattern of this disease."*** Furthermore, Dr. Levy indicated that the decline for stroke death overall was an astounding 32 percent. The black stroke death rate was still higher than the white rate, but the gap was closing.

During its deliberations, the task force concurred with Dr. Levy's assessment that risk factor (e.g., high blood pressure) control may not be the total operative mechanism behind the decline in stroke death. But the period of decreasing deaths from this major sequelae among blacks represented a prudent person's target of opportunity for effective action. Thus, these reports were most encouraging to members of the task force. The data suggested that blacks could benefit as much as other Americans from effective high blood pressure control. Indeed, the challenge appeared to be how best to accelerate the rate of improvement in high blood pressure control among black Americans. The importance of this issue was demonstrated by two data sources made available to the task force.

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* Diagnosis and Management of Hypertension, A Nationwide Survey of Physicians' Knowledge, Attitudes and Reported Behavior, DHEW Publication No. (NIH) 79-1056.

** Washington Post, February 24, 1979.

*** New England Journal of Medicine, Vol. 306, No. 9, p. 490-491.

The first source was an analysis by NHLBI's biometry program staff which estimated that a reduction of the black stroke death rate to the same as the rate for white Americans could save approximately 7,000 black American lives per year.* The second source was a preliminary report of data from a 1978 probability sampling of households in a state with a significant black population. This preliminary report showed that the prevalence of high blood pressure among blacks remained higher than among whites, especially at the higher diastolic readings (e.g., at 105 mm Hg diastolic and above blacks had over twice the prevalence of whites). The percentages of black hypertensives who were aware of this condition tended to be less than that among whites. This was especially the case for younger black males.**

5. The Current Challenge--Definition of High Blood Pressure Control Among Blacks

The NBHPTF accepted the following conventions of blood pressure definitions as being applicable to black Americans as well as other Americans. See tables 1 and 2 taken from the Joint National Committee Report.

a. The NBHPTF agreed with the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure (JNC) on the use of diastolic blood pressure as the basis for confirming high blood pressure and the associated recommended actions. The NBHPTF recognized the actuarial and epidemiological data concerning the increased risk from elevated systolic blood pressure. However, clear evidence of the benefits of treatment of systolic blood pressure was not available to the NBHPTF during its deliberations.

b. The NBHPTF accepted the concept of attaining a goal blood pressure. Absent other indications, the goal blood pressure should be less than 90 mm Hg diastolic. Such a goal, when attained, places the hypertensive patient within the range of substantially reduced actuarially based risks.

c. The NBHPTF accepted the JNC recommendations for assessing blood pressure elevations.

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* Internal communication from Thomas Thom, statistician, NHLBI, to Dr. Donald Ware, chief, High Blood Pressure Demonstration Program, NHLBI.

** Staff Note: Final data, from several states, which became available after final NBHPTF deliberations confirmed these preliminary findings.

TABLE 1

Recommended Action for Initial Blood Pressure Measurement

Systolic/Diastolic	Recommended Action
A. Diastolic 120 or higher	All adults Prompt evaluation and treatment
B. 160/95 or higher	All adults Confirm blood pressure within one month
C. 140/90 to 160/95	Under age 50 Blood pressure check with 2-3 months
	Age 50 or older Check within 6-9 months
D. Below 90 Diastolic	All Adults Blood pressure check yearly

Source: Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure: A Cooperative Study, JAMA, 237:255-261, 1977.

TABLE 2

Followup Recommendations

Average Diastolic Blood Pressure	Recommendation Action
A. 120 or higher	Immediate evaluation and treatment indicated
B. 105-119	Treatment indicated
C. 90-104	Individualize treatment
D. Under 90	Remeasure blood pressure at yearly intervals

Source: Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure, op. cit.

C. Implications

The task force recognizes that the reversal of the problem of uncontrolled blood pressure among black Americans cannot be accomplished with a few short-term projects. Effective and sustained systemic responses must be made by the Nation's health care delivery systems; the financing entities for health care; public agencies; private foundations; voluntary associations; black religious; community and fraternal organizations; and the business and organized labor elements of our society.

A generation of serious activity can make the goal and objectives of the NBHPTF a reality.

D. Statement of Approach for the 20-Year Effort

1. What is to be accomplished?

The NBHPTF recommends that a 20-year effort be undertaken to bring uncontrolled high blood pressure among black Americans under control. Such an effort must have quantifiable objectives by which to assess progress. Based upon current state-of-the-art assumptions with regard to available efficacious therapies, two major objectives were suggested by the NBHPTF's deliberations.

a. Among blacks with diastolic blood pressures of 105 mm Hg and above, attain effective control (diastolic less than 90 mm Hg) among a net of 50 percent or more of hypertensive black Americans within the 5-year period 1981-85. Within each subsequent 5-year period (1986-90, 1991-95, 1996-2000), bring under control at least 50 percent (net) of remaining hypertensive black Americans in each period.

Reports reviewed by the NBHPTF suggest that it is this category which represents those who are statistically at the greatest risk of experiencing the sequelae of uncontrolled high blood pressure (stroke, kidney failure and heart disease). Indeed at the levels of 115 mm Hg and above, there is impressive evidence that the aforementioned sequelae are often imminent.

Additionally, there is some evidence that hypertensive black Americans may tend to be overrepresented in these higher elevations. For example, preliminary data from four statewide random probability sample of households in Maryland, Connecticut, California and South Carolina indicated that blacks had from 1.7 to 3.1 times the number of persons in the 105 mm Hg diastolic and above category as whites.

Highly focused education and control activities among hypertensive black Americans with the aforementioned high elevations can be expected to have dramatic, immediate beneficial effects. Furthermore, this objective is compatible with similar target control levels expressed by the NHBPEP for all Americans.*

It is the expectation of the NBHPTF that suitable survey and other data acquisition techniques will be utilized by appropriate Federal agencies and others to establish a baseline estimate of blacks now in the 105 mm Hg diastolic and above categories. Periodic measures of progress should be made regarding the attaining of the objective of controlling the blood pressure of persons at these high levels.

b. For persons in the 90-104 mm Hg diastolic range, attain better levels of control and awareness by reducing the percentage of black Americans in each of the following categories:

1) Undetected hypertensives
2) Detected hypertensives, not in treatment
3) Detected hypertensives, in treatment, not under control

(Control defined as less than 90 mm Hg diastolic)

The rate of this reduction should be such as to produce resulting percentages of awareness and control at the end of each 5 years equal to the percentages in the general population. The clear need for many areas of the country would be for extraordinary activity during the next 5 years (1981-85) to achieve black parity in awareness and control.

2. What general approaches should be used?

a. It is recommended that special attention be given to the Joint National Committee's recommendation that all health care providers screen their patients routinely for high blood pressure, thus reducing the need for mass screening projects. It was the task force's position, however, that in certain predominately black communities, well organized mass screening activity may yet be required to compensate for the access problems that are yet present among some black populations.

b. It is recommended that any mass screening projects in predominately black communities include appropriate followthrough mechanisms that are in place prior to the initiation of mass screening.

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* The NHLBI Health Education Branch's 1979 Operational Fact Book states NHBPEP's goal as follows: "through a program of education to health professionals and general public, to reduce by 50 percent every five years (starting from 1973) the number of persons with a diastolic blood pressure greater than 104 mm Hg."

Such mechanisms should include:

- Referral procedures to local sources for physician confirmation of a sustained elevation.

- Procedures for following up with the patient and/or providers to ascertain if the confirmation visit took place. (Patient consent processes should be included in such procedures.)

- Procedures for providing hypertensives with provider and community systems for frequent monitoring of blood pressure.

- Approaches for continuous reinforcement of hypertensives and their families regarding the need for lifetime compliance with antihypertensive medication regimens and lifestyle changes.

It was noted by the NBHPTF that a church based program in Memphis* had organized such a model activity in concert with the local provider community, voluntary associations and business and governmental agencies. Documentation of this effort and comparable programs in other cities is encouraged by the NBHPTF. The task force expressed special concern about the segments of the black population which are not being reached by existing HBP control efforts. Examples of these include unemployed persons (especially young black males) and persons who are in correctional facilities. On the latter item, testimony was presented to the task force by the director of the Federal Prison Health System, the director of the HEW prison health initiative and a former warden of a major city jail. HBP treatment in prison was viewed as being affected by all of the issues related to prison health care. Groups that are concerned with institutional health services should consider incorporating HBP control concerns into their agendas.

c. It is recommended that black health care providers take the lead in developing, adapting or utilizing continuing professional education efforts in the promotion of high quality care for black Americans with high blood pressure. It is recommended further that nonblack providers serving significant number of black patients be encouraged to engage in comparable professional education activities.

Based on a Food and Drug Administration survey of physicians and preliminary data gathered from the membership of task force constituent organizations, the NBHPTF concluded that such professional educational activities would be most useful in promoting wider physician and other provider adherence to Joint National Committee guidelines, as well as other national high blood pressure education and control guidelines.

d. It is recommended that community organizations, churches, local government, unions, business and other highly visible components in black communities engage in collaborative, organized high blood pressure screening and followthrough activities that are consistent with the mechanisms suggested in the aforegoing item "b."

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*Church and Community United to Fight Hypertension.

e. An organized effort should be undertaken to remove or reduce certain potential barriers to effective high blood pressure education and control.

To this end, the NBHPTF has developed recommendations on the following topics:

Provider Roles
Community Education and Coordination
Biomedical and Epidemiological Research Issues
Delivery Systems Issues - Research and Policy Recommendations
Nutritional Issues
Health Education
Behavioral Studies Related to Hypertension
Manpower
Pediatric High Blood Pressure Issues
Financial Barriers
Physician Assistants and Nurse Practitioners

These recommendations are presented in detail in Chapters 3 and 4.

3. Implementation Strategic Overview

To accomplish the implementation of the proposed 20 year effort to achieve maximum control of high blood pressure among blacks, the NBHPTF recognizes that a number of strategies will need to be employed. Some examples are the following:

a. High blood pressure education and control must become a high priority issue for the national associations of black health care professionals and for the national leadership of various civic and social welfare organizations.

b. Ultimately, programs and efforts toward effective high blood pressure education and control among black Americans must be implemented on the local level, utlizing such institutions, agencies, individual providers and other resources as may be extant or developed for this purpose. It was suggested by providers at MeHarry Medical College and other sites that black provider involvement in local health systems agencies and public forums which review economic and social issues that impact on health care would be essential to the prospects for success on local levels.

c. High blood pressure education and control programs and efforts for black Americans should be institutionalized within local private and public structures to avoid long-term dependence on categorical, Federal programs of uncertain tenure.

d. The leadership of integrated and nonblack organizations with significant influence in black communities and populations should be encouraged to give high priority to the establishment of high blood pressure education and control for black communities.

e. The NHLBI and its operational components, such as the NHBPEP and the DHVD, should seek to incorporate the programmatic concerns of the NBHPTF into all of the Institute's applicable activities. To assure program sensitivity, special efforts should be undertaken to assure that qualified black Americans are represented at decision-making levels in the Institute staff and in the staff of contractors and grantees engaged to implement NBHPTF recommendations. Qualified section 8-A contractors (i.e., Small Business Administration, minority set-aside program) should be utilized in projects requiring special sensitivities to the programming of collaborative efforts with black organizations and projects.

f. The 20-year effort toward controlling high blood pressure among black Americans should be linked with other health promotion and disease prevention activites of the Federal Government and private organizations.

For example, in several sites visited by Task Force representatives, sickle cell education and counseling projects and other categorical projects were coordinated closely with HBP control efforts. Such coordinated efforts are to be encouraged.

CHAPTER III. NBHPTF RECOMMENDATIONS: HIGH BLOOD PRESSURE EDUCATION AND CONTROL SYSTEM

I. Background

It was the charge of the NBHPTF to develop consensus on the respective roles of black health care providers in the detection, diagnosis, treatment and long-term management of hypertension in black populations. As the NBHPTF proceeded to meet this challenge it became apparent to the task force and its assigned staff that serious attention needed to be given to the systems and structures within which such roles might be exercised.

An initial response to this concern was to describe in detail a model HBP control process. This model process identified in detail the functions and activities which, in the opinion of the task force, are required for the effective control of HBP. Arrayed against this compilation of functions and activities are the recommended roles for the various professions involved with the NBHPTF, the data that ought to be generated for operational purposes, and the interim operational results that should be attained by each stage of the HBP control process.

By adopting this approach, the NBHPTF anticipated that the various audiences which might consider the provider role recommendations could view them in the context of the overall HBP control system's functioning.

A second concern that became apparent during the NBHPTF's deliberations was that a description of a model HBP control system, however thorough, would not address the issue of abetting the entry of blacks into that control process or the effective functioning of that control process. These concerns are addressed by the NBHPTF's commentaries in this report on the need for:

- Continuing provider education to promote the proper execution of suggested provider roles within the proposed model HBP control process.

- Community awareness programs to encourage blacks to access the model HBP control process, where appropriate, for detection and treatment.

- Community collaboration systems to assure that HBP detection and treatment services are available to all segments of black populations, including the medically indigent, unemployed and other hard-to-reach segments, in addition to the employed, the middle-class, and other segments which have sufficient third-party payment or other sources for financing their health care.

The remainder of this chapter presents:

- The model high blood pressure process.

54

- The NBHPTF's suggested provider roles for each step in the process.

- The NBHPTF commentaries on provider education, community awareness and community collaboration to effect the control process.

II. Model High Blood Pressure Control Process

The model process for high blood pressure control services is based, in part, upon an outline presented in the Handbook for Improving High Blood Pressure Control in the Community.* This process outline has been modified by the NBHPTF and expanded to include listings of detailed activities within each subobjective. These detailed activities were developed primarily from sources made available to the task force from NHLBI and its NHBPEP. Exhibit 14 presents a list of sources used for this purpose.

Exhibit 15 summarizes the model process in terms of goal, objectives, and subobjectives to be attained. The subobjectives have been divided into the three functional areas of intake, attainment of control, and long-term maintenance.

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*Handbook for Improving High Blood Pressure Control in the Community, DHEW Publication No. (NIH) 77-1986.

Exhibit 14. Reference list for model high blood pressure services process

1. REFERENCE A

   Education of physicians in high blood pressure. Performance characteristics, learning objectives and evaluation approaches. Circulation, news from the American Heart Association, May 1975.

2. REFERENCE B

   Nursing education in high blood pressure control. Report of the Task Force on the role of nursing in high blood pressure control. DHEW Publication No. (NIH) 76-1052.

3. REFERENCE C

   Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. DHEW Publication No. (NIH) 77-1088.

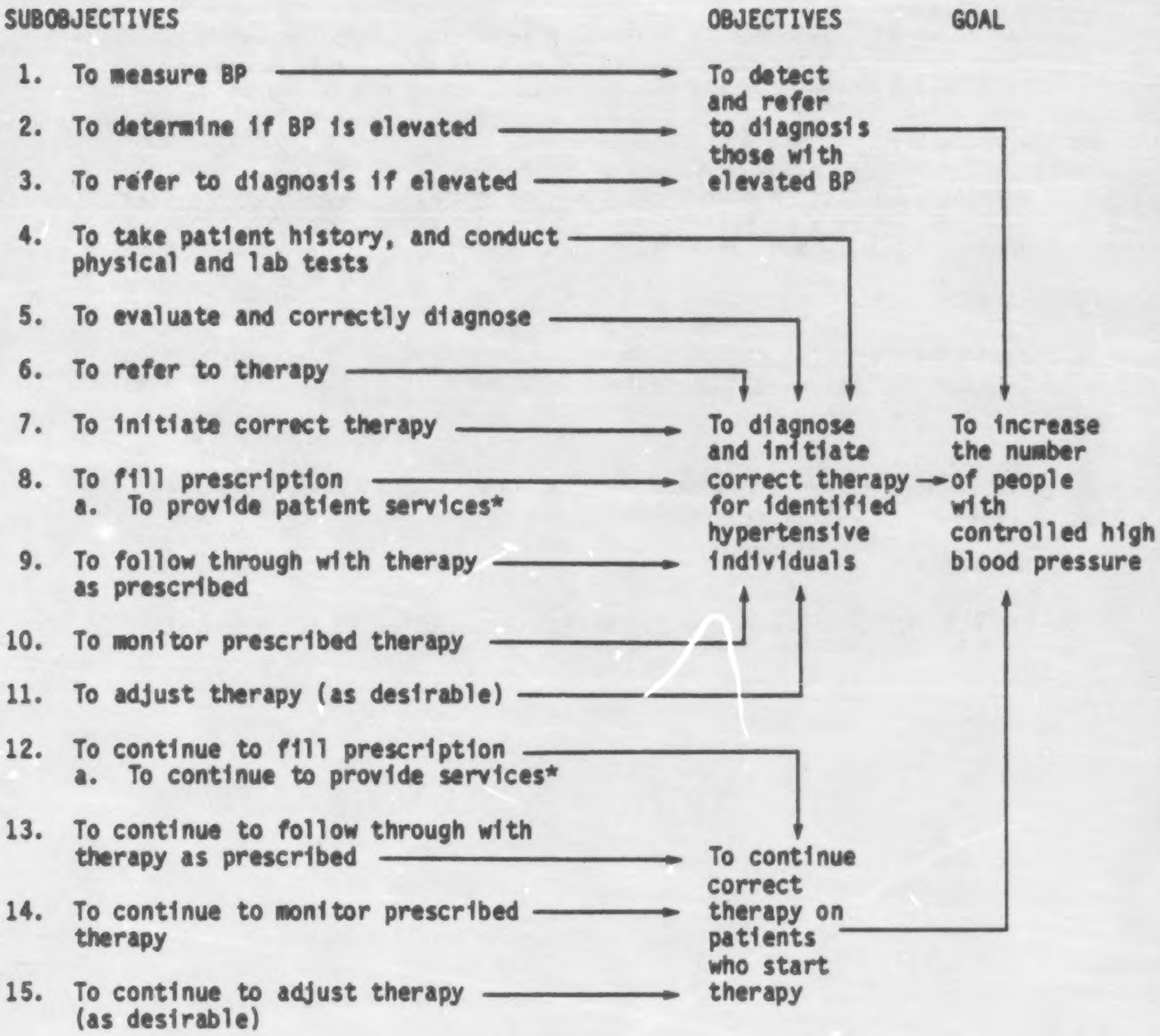
4. REFERENCE D

   Report of the Task Force on blood pressure in children. Pediatrics, Vol 59, No. 5, Part 2, May 1977.

5. REFERENCE E

   Handbook for Improving High Blood Pressure Control in the Community. DHEW Publication No. (NIH) 77-1086.

EXHIBIT 15. Goal, Objectives, Subobjectives of HBP Control



SUBOBJECTIVES

1. To measure BP
2. To determine if BP is elevated
3. To refer to diagnosis if elevated
4. To take patient history, and conduct physical and lab tests
5. To evaluate and correctly diagnose
6. To refer to therapy
7. To initiate correct therapy
8. To fill prescription
   a. To provide patient services*
9. To follow through with therapy as prescribed
10. To monitor prescribed therapy
11. To adjust therapy (as desirable)
12. To continue to fill prescription
    a. To continue to provide services*
13. To continue to follow through with therapy as prescribed
14. To continue to monitor prescribed therapy
15. To continue to adjust therapy (as desirable)

OBJECTIVES

To detect and refer to diagnosis those with elevated BP

To diagnose and initiate correct therapy for identified hypertensive individuals

To continue correct therapy on patients who start therapy

GOAL

To increase the number of people with controlled high blood pressure

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*Services related to adjunctive factors and behavioral approaches.

A. Intake Functions

Objective: To detect and refer to diagnosis those with elevated blood pressure

Subobjectives:

Function	Subobjectives
1-1	To measure blood pressure
1-2	To determine if blood pressure is elevated
1-3	To refer to diagnosis if elevated

Summary

These intake functions apply primarily to persons not receiving medical attention within the health care delivery system, and to persons who have entered the system at an entry point at which HBP diagnosis and treatment services are not provided. Examples of the former would be neighborhood screening programs conducted outside of health care facilities, worksite screening efforts, etc. Examples of the latter would be dentists' offices, optometrists' offices, podiatrists' offices, and offices of physicians who do not diagnose or treat HBP.

It is the NBHPTF view that persons who are presently receiving medical attention at points in the health care delivery systems that are appropriate for HBP control services would have blood pressure measurements taken in the process of performing the control functions (C-4 through C-11).

B. Control Attainment Functions

Objectives: To diagnose and initiate correct therapy for identified hypertensive individuals

Subobjectives:

Function	Subobjectives
C-4	To take patient history and conduct physical lab tests
C-5	To evaluate and diagnose correctly
C-6	To refer to therapy (if the diagnosing provider is not the treating provider)

C-7	To initiate correct therapy
C-8	To fill prescription
C-8a	To provide service related to adjunctive factors and behavioral approaches
C-9	(Patient) to follow-through with therapy as prescribed and recommended
C-10	To monitor perscribed therapy
C-11	To adjust therapy, as desirable

Summary

These functions involve the diagnosis and initiation of correct therapy for attaining HBP control. The initial attainment of goal blood pressure would be anticipated as being co-terminus with the successful conclusion of activities under function C-11, "to adjust therapy, as desirable."

C. Long-Term Maintenance Functions

Objective: To continue therapy on patients who start therapy

Subobjectives:

Function	Subobjectives
M-12	To continue to fill prescriptions
M-12a	To continue to provide other services related to adjunctive factors and behavioral methods
M-13	(Patient) to continue to followthrough with therapy as recommended
M-14	To continue to monitor prescribed therapy
M-15	To continue to adjust therapy, as desirable

D. Notes on Reading Detailed Function Statements

The description of each function begins with a statement of its subobjective (e.g., "To measure blood pressure," "To fill prescription," etc.). Other descriptive items are used as follows:

1. Trigger

The circumstances or events which may cause or initiate the performance of the function, such as patient request, specific clinical indications, etc.

2. Outcomes

This term is used to indicate the results that should be obtained as a result of performing the function. These desired outcomes are presented, in most functions, in terms of results that should be obtained by or for the patient, data that should be created or updated, results that should be obtained by or for the provider.

3. Activities

A list of detailed activities which normally would need to be performed in fulfilling the subobjective for the function.

4. Recommended Provider Roles

The activities to be performed by each applicable category of provider in each of three major settings: Solo Practice, Comprehensive Health Centers, Hospital Ambulatory Care Facilities. The provider categories used in each setting are listed below.

- "Solo" Practice

  -Solo Practising Dentists
  -Solo Practising Physicians
  -Nurses in Visiting Nurses Associations
  -Solo Practising Optometrists
  -Pharmacists in Independently Owned Pharmacies
  (Please note that the chain pharmacy role suggestions were comparable roughly to the independents' roles. Barrier perceptions were different, however.)
  -Solo Practising Podiatrists

- Comprehensive Health Centers (CHC), Group Practice-type Health Maintenance Organizations (HMO)

  -Dentists in CHC's
  -Physicians in CHC's
  -Nurses in CHC's

-Optometrists in Group Practice-type HMO's (This HMO role was perceived by staff as being comparable approximately to the roles which might be observed in CHC's.)

- **Hospital**

  -Physicians in Hospital Outpatient Departments
  -Dentists in Hospital Dental Clinics
  -Nurses in Hospital Outpatient Departments and Emergency Rooms
  -Clinical Pharmacists in Hospitals
  -Podiatrists in Hospitals

- **Other**

  -Physicians in Group Practice
  -Optometrists in Group Practice
  -Pharmacists in Chain Pharmacies

5. Additional Recommendations

E. Detailed Function Statements

When reading the activities suggested for each provider, please refer to the following code designations:

A = Assist
C = Consult
N = None
P = Perform
R = Refer
S = Supervise

A. Intake Functions

Objective: To detect and refer to diagnosis those with elevated blood pressure.

Function 1-1 -- Subobjective: To measure blood pressure

1. Triggers

   a. Any encounter with a health care professional for physical examination or treatment

   b. Special screenings

   c. Patient-initiated encounters

   d. Periodic blood pressure measurement encounters initiated by someone other than the patient

2. Outcomes

   a. Patient

      - Patient (examinee) with blood pressure measurement taken in at least one position in at least one extremity

      - Patient or significant other (spouse, friend, etc.) with information as to next appropriate step (e.g., annual recheck, etc.)

   b. Data

      - Systolic/diastolic reading(s) in written form in accord with American Heart Association recommendations as modified in 1979 (disappearance of sound for diastolic)

      - Identifying information (e.g., name and telephone contacts(s), address, age, sex) on patient (examinee) or his/her significant others. This information is solely for purposes of facilitating contact with patient (examinee) and his/her provider

      *- Name, telephone number, and address of provider who is available to provide prompt medical care if necessary (e.g., diastolic 120 mm Hg or above)

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*These items must be available in those instances in which the provider measuring the blood pressure is not the same as the provider who will confirm, diagnose or treat.

- Name, telephone number, and address of provider whom patient has selected, or to whom patient is being referred for confirmation of blood pressure reading

c. Provider

Provider who has completed blood pressure measurements, communicated significant information to other health care team members, where necessary, and informed patient (examinee) of appropriate next step.

3. Activities

a. Measure blood pressure accurately in a manner consistent with scientific principles

b. Obtain identifying information elements (e.g., name, telephone contact, address, age, sex) that are necessary for contact with examinee and for determining recommendation for initial blood pressure measurement

c. Provide a quiet environment

d. Position patient and equipment properly

e. Palpate pulse prior to auscultating

f. Take blood pressure in more than one extremity and/or position when indicated

g. Communicate orally and in writing significant information to other health team members

h. Record diastolic findings according to recommendations of the American Heart Association as modified in 1979 (disappearance of sound for diastolic)

*i. Advise patient of appropriate next step (e.g., get confirmation reading by _________ date, get annual reading, obtain prompt medical attention). The following actions are those recommended by the Joint National Committee

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*Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure, op. cit., pp. 6-7.

C3

Diastolic	Recommended Action
120 or higher	*All adults*: prompt evaluation and treatment
95 or higher	*All adults*: confirm blood pressure elevation within 1 month
90-94	*Under age 50*: blood pressure check within 2-3 months
	Age 50 or older: check within 6-9 months
Below 90	*All adults*: blood pressure check yearly

MEDICINE

Function 1. Subobjective: To measure blood pressure
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Measures blood pressure accurately in a manner consistent with scientific principles.				
a. Provides a quiet environment.	S and P	S and P	S and P	S and P
b. Positions patient and equipment properly.	S and P	S and P	S and P	S and P
c. Palpates pulse prior to auscultating.	S and P	S and P	S and P	S and P
d. Takes blood pressure in more than one extremity and/or position when indicated.	S and P	S and P	S and P	S and P
e. Communicates orally and in writing significant information to other health team members.	S and P	S and P	S and P	S and P
f. Records diastolic findings according to recommendations of American Heart Association	S and P	S and P	S and P	S and P

DENTISTRY

Function 1. Subobjective: To measure blood pressure

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. *Measures blood pressure accurately in a manner consistent with scientific principles.			
**a. Provides a quiet environment.	P and S	S	P and S
b. Positions patient and equipment properly.	P and S	S	P and S
c. Palpates pulse prior to auscultating.	P and S	S	P and S
***d. Takes blood pressure in more than one extremity and/or position when indicated.	P and S	P and R	P, S and R
e. Communicates orally and in writing significant information to other health team members.	P and S	P and S	P and S
f. Records diastolic findings according to recommendations of American Heart Association	P and S	S	P and S

Additional comments.

* Dental Chair

** Arms only. Refer to physician if another position is indicated.

***Check identified hypertensive patients on each visit. An adequate history is needed. Check others on first visit. See note attached.

NURSING

Function 1. Subobjective: To measure blood pressure
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B* (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Measures blood pressure accurately in a manner consistent with scientific principles.				
a. Provides a quiet environment.	S and P	S	P and S	P and S
b. Positions patient and equipment properly.	S and P	S	P and S	P and S
c. Palpates pulse prior to auscultating.	S and P	S	P and S	P and S
d. Takes blood pressure in more than one extremity and/or position when indicated.	S and P	S	P and S	P and S
e. Communicates orally and in writing significant information to other health team members.	S and P	S	P and S	P and S
f. Records diastolic findings according to recommendations of American Heart Association	S and P	S	P and S	P and S

Additional comments.
*Hosp. OPD - In institutions in which certain areas are staffed only by RN's, these activities would be performed by the nurse.

OPTOMETRY

Function 1. Subobjective: To measure blood pressure
(A = Assist C - Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Measures blood pressure accurately in a manner consistent with scientific principles.			
a. Provides a quiet environment.	S and P	S	S
b. Positions patient and equipment properly.	S and P	S	S
c. Palpates pulse prior to auscultating.	S and P	R	R
*d. Takes blood pressure in more than one extremity and/or position when indicated.	P and S	S and P	S and P
e. Communicates orally and in writing significant information to other health team members.	P and S	P	P
f. Records diastolic findings according to recommendations of American Heart Association	S and P	P	P

*Arms only. Refer to physician if another position is indicated.

PHARMACY

Function 1. Subobjective: To measure blood pressure

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C* (Hosp.)	Setting D (CHC)
1. Measures blood pressure accurately in a manner consistent with scientific principles.				
a. Provides a quiet environment.	P and S	P and S	S and P	S and P
b. Positions patient and equipment properly.	P and S	P and S	S and P	S and P
c. Palpates pulse prior to auscultating.	P and S	P and S	S and P	S and P
**d. Takes blood pressure in more than one extremity and/or position when indicated.	P and S	P and S	S and P	S and P
***e. Communicates orally and in writing significant information to other health team members.	P and S	P and S	S and P	S and P
f. Records diastolic findings according to recommendations of American Heart Association	P and S	P and S	S and P	S and P

Additional comments.

* Clinical pharmacist is part of health team and as situation arises may be called upon to take BP measurements.

** Arms only. Refer to physician if another position is indicated.

***Pharmacist must give information to patient or physician.

Function 1. Subobjective: To measure blood pressure

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Measures blood pressure accurately in a manner consistent with scientific principles.			
a. Provides a quiet environment.	P and S	S	P and S
b. Positions patient and equipment properly.	P and S	S	P and S
c. Palpates pulse prior to auscultating.	P and S	S	P and S
*d. Takes blood pressure in more than one extremity and/or position when indicated.	P and S	S and R	P,S, and R
e. Communicates orally and in writing significant information to other health team members.	P and S	P and S	P and S
f. Records diastolic findings according to recommendations of American Heart Association	P and S	S	P and S

*Arms only. Refer to physician if another position is indicated.

Note to Function #1 - Dentistry

The view was expressed within the dental working group of the task force that blood pressure measurement should be a normal part of the dentist pre-op preparation. The detection of high blood pressure problems could be viewed as a by-product. This viewpoint has been promoted in dental education at Howard University, Temple University and Fairleigh Dickinson College of Dentistry* among other schools.

A possible research issue is raised regarding the possibility of assuming higher readings in dental offices due to the anxieties of many persons entering that environment.

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*Interview with Dr. Francis Davis of National Dental Association.

Function 1-2 -- Subobjective: To determine if blood pressure is elevated

1. Triggers

   a. An elevated reading during function 1-1

   b. A request by the provider performing the initial reading to obtain a second reading

   c. Patient or examinee request

2. Outcomes

   a. Patient

      - Patient (examinee) with blood pressure measurement confirmed after readings on two occasions

      - Patient and/or significant others (spouse, friend, etc.) with information as to next appropriate step

   b. Data

      - Average and individual reading(s) in written form in accord with American Heart Association recommendations as modified in 1979 (disappearance of sound for diastolic)

      - Identifying information (e.g., name and telephone contacts(s), address, age, sex) on patient (examinee) or his/her significant others. This information is solely for purposes of facilitating contact with patient (examinee) and his/her provider

      - Name, telephone number, and address of provider who is available to provide prompt medical care if necessary (e.g., diastolic 120 mm Hg or above)

      *- Name, telephone number, and address of provider who patient has selected, or by whom patient is being treated

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*Relevant when provider performing this function is not the same as the provider who will diagnose or treat the patient.

3. Activities

a. Recheck blood pressure by performing tasks outlined in function I-1

b. Calculate average values of measurements taken on the two or more occasions

c. Utilize age/BP table in JNC report to determine recommended action (see function I-1, item C)

d. Inform patient of readings and the recommended actions

MEDICINE

Function 2. Subobjective: To determine if blood pressure is elevated

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B* (Group)	Setting C* (CHC)	Setting C (Hosp. OPD)
1. Recheck blood pressure	P and S	P and S	P and S	P and S
2. Calculate average values	P and S	P and S	P and S	P and S
3. Utilize age/BP table to determine recommended action	P and S	P and S	P and S	P and S
4. Inform patient of readings and the recommended actions	P, R, C and S	P and S	P and S	P and S

Additional comments.

*In these settings, all significant elevations must be seen by a physician. This practice would be in accord with JNC guidelines.

DENTISTRY

Function 2. Subobjective: To determine if blood pressure is elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
*1.	Recheck blood pressure	P and S	S	P and S
2.	Calculate average values	P and S	N	S and R
3.	Utilize age/BP table to determine recommended action	P and S	N	S and P
**4.	Inform patient of readings and the recommended actions	P,R and C	S and R	S and R

Additional comments.

* This should be done on each recall visit for patients with original readings above "JNC" (Joint National Committee) guidelines.

**P= Provide patient with information on the elevation only. Discuss patient's planned dental procedure and cautions needed if patient is possibly hypertensive.
R= Refer to physician if elevated.
C= Consult with physician relative to management of patient's dental problem.

NURSING

Function 2. Subobjective: To determine if blood pressure is elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Recheck blood pressure	P and S	P	P	P and S
2. Calculate average values	P and S	P	P	P and S
3. Utilize age/BP table to determine recommended action	A,P and S	A	A	P and S
4. Inform patient of readings and the recommended actions	A,P and S	A	A	P,R and C

Additional comments.

The additional responsibilities and appropriate use of the extended role nurse (i.e., Nurse Practitioners, etc.) must be developed.

OPTOMETRY

Function 2. Subobjective: To determine if blood pressure is elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Recheck blood pressure	S and P	S and P	S and P
2. Calculate average values	P and S	P	P
3. Utilize age/BP table to determine recommended action	P and S	P and A	A
4. Inform patient of readings and the recommended actions	P,R and C	A	A

PHARMACY

Function 2. Subobjective: To determine if blood pressure is elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C* (Hosp.)	Setting D (CHC)
1. Recheck blood pressure	P and S	P and S	P	P
**2. Calculate average values	P and S	P and S	P	P
3. Utilize age/BP table to determine recommended action	P and S	P and S	P	P
4. Inform patient of readings and the recommended actions	P,R,C and S	P,R,C and S	P	P

Perceived barriers.

Setting A - Lack of time, space and help.
Setting B - Possible volume orientation.
Setting C - Professional tradition of pharmacist not being involved in the health care team.

Additional comments.

* Role will depend upon their responsibilities within health care team.

**The pharmacists' work group agrees with the need to develop individualized values but prefers to adhere to presently accepted standards.

PODIATRY

Function 2. Subobjective: To determine if blood pressure is elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Recheck blood pressure	P and S	S	P and S
2. Calculate average values	P and S	N	S and R
3. Utilize age/BP table to determine recommended action	P and S	N	S and P
4. Inform patient of readings and the recommended actions	P,R and C	S and R	S and R

Function I-3* -- Subobjective: To refer patient (examinee) to diagnosis if elevated reading was obtained

1. **Triggers**

   Elevated reading(s) from function I-2 (to determine if blood pressure is elevated)

2. **Outcomes**

   a. Patient

      - Patient (examinee) with appointment for evaluation and diagnosis

      - Patient (examinee) with information concerning cost of diagnostic visit, third-party payor coverage

   b. Data

      - Systolic/diastolic reading(s) in written form in accordance with American Heart Association recommendations as modified in 1979 (disappearance of sound for diastolic)

      - Identifying information (e.g., name, telephone contact(s), address, age, sex) on patient (examinee) or his/her significant others. This information is solely for purposes of facilitating contact with patient (examinee) and his/her provider

      *- Name, telephone number, and address of provider who is available to provide prompt medical care if necessary (e.g., diastolic 120 mm Hg or greater)

      *- Name, telephone number, and address of provider whom patient has selected or to whom patient is being referred

      - Time and date of appointment with identified provider

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*This function performed only if provider performing function I-2 (determine BP elevation) is not the same as the diagnosing provider.

c. **Provider**
   Referring provider with record of referral made and advice or information given to patient

4. **Activities**

   a. Contact provider who will evaluate and diagnose

   b. Make appointment

   c. Followup to confirm that examinee has kept appointment

   d. Followup examinees not making or keeping appointments

   e. Note action in record

92

Function 3. Subobjective: To refer to diagnosis if elevated*
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Contact provider who will diagnose	P and S	P and S	P and S	P and S
2. Make appointment	P,R and A	R and A	R and A	S
3. Followup to confirm kept appointment	P	S	S	S
4. Followup examinees not making or keeping appointments	S	S	S	S
4a. Note action in record	P	P	P	P

Additional comments.

*This subobjective applies to those physicians who do not treat HBP in their practices.

DENTISTRY

Function 3. Subobjective: To refer to diagnosis if elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1.	Contact provider who will diagnose	P and S	S and R	P and S
*2.	Make appointment	P,R and A	R and A	R and A
**3.	Followup to confirm kept appointment	P	S	P and S
***4.	Followup examinees not making or keeping appointments	N	A	A and P
4a.	Note action in record	P	P	P

Additional comments.

Standard Procedures are needed for emergencies.

* Dentist must have developed organizational and individual relationships with accepting providers
** Perform or supervise when patient returns to dental office after time during which referral or consulting physician should have seen the patient.
*** Review compliance with HBP referral as noted in the record.

NURSING

Function 3. Subobjective: To refer to diagnosis if elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1.	Contact provider who will diagnose	S and P	P	S	P and S
2.	Make appointment	S and P	S	S	P,R and A
*3.	Followup to confirm kept appointment	S and P	P	R and C	P
*4.	Followup examinees not making or keeping appointments	S and P	P	R and C	P
4a.	Note action in record	S and P	P	P	P

Additional comments and questions for discussion.

*Hospital inpatient services: nurses should refer and consult.

OPTOMETRY

Function 3. Subobjective: To refer to diagnosis if elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Contact provider who will diagnose	P and S	P	P and S
2. Make appointment	P,R and A	P and S	P and S
3. Followup to confirm kept appointment	P	P	N
4. Followup examinees not making or keeping appointments	N	S	S
4a. Note action in record	P	P	P

PHARMACY

Function 3. Subobjective: To refer to diagnosis if elevated
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1.	Contact provider who will diagnose	*P or S	*P or S	P or S (routinely)	P or S (routinely)
2.	Make appointment	P,R and A	P,R and A	P and S	P and S
**3.	Followup to confirm kept appointment	P**	P**	P** and S	P** and S
4.	Followup examinees not making or keeping appointments	N	N	S and P	S and P
4a.	Note action in record	P	P	S and P	S and P

Perceived barriers.

Settings A and B - Lack of pharmacist's control over followup.
Setting C - Availability of staff when needed.

**Only in life-threatening situations.

PODIATRY

Function 3. Subobjective: To refer to diagnosis if elevated
(A = Assist C = Consult N = None P = Perform R = Refer S - Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Contact provider who will diagnose	P and S	S and R	P and S
2. Make appointment	P,R and A	R and A	R and A
3. Followup to confirm kept appointment	P	S	P and S
4. Followup examinees not making or keeping appointments	N	A	A and P
4a. Note action in record	P	P	P

B. Control Attainment Functions

Objective: To diagnose and initiate correct therapy for identified hypertensive individuals

Function C-4 -- Subobjective: To take patient history and conduct physical and laboratory tests

1. Triggers

   a. Referral from function I-1 for examinees requiring immediate medical attention (e.g., diastolic 120 mm Hg)

   b. Referrals from function I-3 if providers performing functions I-1 through I-3 are different than the provider performing function C-4

   c. Elevated readings in functions I-1 and I-2 if the provider performing function I-1 and I-2 is the same as the provider performing function C-4

2. Outcomes

   a. Patient who has been given appropriate tests and examinations and has provided relevant history

   b. Data* (The following data elements are those identified in the JNC report)

      - Patient History

        "The medical history should consist of any previous history of HBP or its treatment, the use of birth control pills or other hormones, cardiac or renal disease, stroke, and other cardiovascular risk factors, including diabetes, cigarette smoking, high salt intake, lipid abnormalities, or family history of high blood pressure or its complications. A history of weakness, muscle cramps, and polyuria suggests further screening for aldosteronism. A history of episodes of headaches, palpitations, excessive sweating, etc., suggests further study for pheochromocytoma."

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*Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure, op. cit.

- Physical Evaluation

  "In addition to two or more blood pressure measurements (one standing), the pretreatment physical examination should include the items listed below:

  - Height and weight
  - Funduscopic examination of the eyes for hemorrhages, exudates, and papiledema; especially important in persons with diastolic blood pressures of 110 mm Hg or greater
  - Examination of the neck for thyroid enlargement, bruits, and distended veins
  - Auscultation of the lungs
  - Examination of the heart for increased rate, size, precordial heave, murmurs, arrhythmias, and gallops
  - Examination of the abdomen for bruits, large kidneys, or dilatation of the aorta
  - Examination of the extremities for edema, peripheral pulses, and neurological deficits associated with stroke
  - Basic Laboratory Tests

    Baseline laboratory tests listed below should be obtained before initiating therapy:

  - Hematocrit
  - Urinalysis for protein, blood, and glucose (dipstick)
  - Creatinine and/or blood urea nitrogen
  - Serum potassium
  - Electrocardiogram"

- "Other tests which may be helpful include a chest X-ray, blood sugar, serum cholesterol, serum uric acid, microscopic urinalysis, and blood count. (Minimal cost to the patient can sometimes be achieved by ordering automated blood chemistries.) Clinical judgment or abnormal findings obtained during the routine evaluation may suggest other tests, such as an intravenous urogram and urinary catecholamines."

- Special Studies (when indicated)

c. Provider with sufficient and documented information to make diagnosis

3. Activities

   a. Conduct patient interview (history)

   b. Examine fundi

   c. Examine heart

   d. Examine periperal pulses

   e. Obtain basic studies

   f. Recognize findings that suggest testing for secondary forms of hypertension

   g. Order and obtain basic studies

Function 4. Subobjective: To take patient history and conduct physical and lab tests
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Conduct patient interview (history)	P and S	S and P	S and P	S and P
2. Examine fundi	P and S	S and P	S and P	S and P
3. Examine heart	P and S	S and P	S and P	S and P
4. Examine peripheral pulses	P and S	S and P	S and P	S and P
5. Recognize findings that suggest secondary forms of hypertension	P and S	S and P	S and P	S and P

Additional comments.

Physicians who treat HBP should perform subobjectives 4-7 in accord with JNC guidelines. Continuity of care should be provided as patient progresses through diagnosis and treatment functions.

DENTISTRY

Function 4. Subobjective: To take patient history and conduct physical and lab tests
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Conduct patient interview (history)	P	S and P	P
2. Examine fundi	N	N	N
3. Examine heart	N	N	N
4. Examine peripheral pulses	P	S	P
5. Recognize findings that suggest secondary forms of hypertension	P and R	R	P and R

Perceived barriers.

Dentists' training regarding pulse viz BP and Secondary HBP causes.

NURSING

Function 4. Subobjective: To take patient history and conduct physical and lab tests
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Conduct patient interview (history)	P,A and S	P and A	P and A	P and A
2. Examine fundi	N*	N*	N*	N*
3. Examine heart	N*	N*	N*	N*
4. Examine peripheral pulses	P and S	N*	N*	N*
5. Recognize findings that suggest secondary forms of hypertension	N*	N* and R	N* and R	N*

Additional comments.

*Extended role nurse may have a role in some settings. This must be defined.

OPTOMETRY

Function 4. Subobjective: To take patient history and conduct physical and lab tests
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Conduct patient interview (history)	P		
2. Examine fundi	P		
3. Examine heart	N		
4. Examine peripheral pulses	N		
5. Recognize findings that suggest secondary forms of hypertension	P and R		

PHARMACY

Function 4. Subobjective: To take patient history and conduct physical and lab tests
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C Hosp.)	Setting D (CHC)
1. Conduct patient interview (history)	P	P	*P (Drug hx only)	*P (Drug hx only)
2. Examine fundi	N	N	N	N
3. Examine heart	N	N	N	N
4. Examine peripheral pulses	N	N	N	N
5. Recognize findings that suggest secondary forms of hypertension	N	N	R	R

Additional comments.

*Only a clinical pharmacist would take such a history in accord with institutional rules. A clinical pharmacist may provide consultation regarding drugs taken by patient and any significant probable impact on lab test results.

PODIATRY

Function 4. Subobjective: To take patient history and conduct physical and lab tests
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Conduct patient interview (history)	P	S and P	P
2. Examine fundi	N	N	N
3. Examine heart	N	N	N
4. Examine peripheral pulses	P	P	P
5. Recognize findings that suggest secondary forms of hypertension	P and R	R	P and R

4. Additional Recommendations

The task force recommends that every patient be guaranteed continuity of care from diagnosis through therapy and maintenance, and that medical record-keeping be maintained in a manner supportive of care continuity.

Function C-5 -- Subobjective: To evaluate and diagnose correctly

1. Triggers

Completion of studies and history of function C-4

2. Outcomes

a. Patient

Patient with information regarding findings and an understanding regarding:

- Seriousness of high blood pressure
- Lifelong nature of high blood pressure
- Possible consequences of not treating high blood pressure
- Importance of medication
- Importance of filling prescription
- Importance of taking medicine as prescribed
- Importance of reporting side effects
- Asymptomatic nature of high blood pressure
- Importance of keeping subsequent appointments
- Other factors

b. Data

- Recorded diagnosis regarding high blood pressure

- Notes of information provided to the patient regarding the diagnosis

c. Provider

Provider with defendable diagnosis regarding high blood pressure

3. Activities

a. Interpret basic studies

b. Interpret special studies

c. Evaluate findings and diagnose

d. Explain lifelong nature of high blood pressure control to patient with a diagnosis of high blood pressure

MEDICINE

Function 5. Subobjective: Evaluate and diagnose correctly
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Interpret basic studies	P	P	P	S and P
2. Order and interpret special studies	P	P	P	S and P
3. Evaluate findings and diagnose	P	P	P	S and P
4. Explain findings and nature of HBP control to patient	P	S and P	P	P

DENTISTRY

Function 5. Subobjective: Evaluate and diagnose correctly
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Interpret basic studies	N	N	N
2. Order and interpret special studies	N	N	N
3. Evaluate findings and diagnose	N	N	N
4. Explain findings and nature of HBP control to patient	N	N	N

NURSING

Function 5. Subobjective: Evaluate and diagnose correctly
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Interpret basic studies	A	A	A	P and R
2. Order and interpret special studies	A	A	A	A and R
3. Evaluate findings and diagnose	A	A	A	A
*4. Explain findings and nature of HBP control to patient	P and A	P and A	P and A	P

Additional comments and questions for discussion.

*Should the nurse have prior permission from the physician prior to performing this task?

OPTOMETRY

Function 5. Subobjective: Evaluate and diagnose correctly
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Interpret basic studies	N	N	N
2. Order and interpret special studies	N	N	N
3. Evaluate findings and diagnose	N	N	N
4. Explain findings and nature of HBP control to patient	N	N	N

PHARMACY

Function 5. Subobjective: Evaluate and diagnose correctly

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1.	Interpret basic studies	N	N	S and A*	C and A*
2.	Order and interpret special studies	N	N	C and A*	C and A*
**3.	Evaluate findings and diagnose	N	N	C and A	C and A
4.	Explain findings and nature of HBP control to patient	N	N	P	P

Additional comments and questions for discussion.

* Drug studies only.

**Consult on evaluation of findings related to drug history. No diagnosis activity should be performed by the pharmacists. Computer profiling support systems are useful in this regard.

Counsel has reservation about any pharmacist role in this activity.

PODIATRY

Function 5. Subobjective: Evaluate and diagnose correctly
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities		Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
*1.	Interpret basic studies	N	N	N
*2.	Order and interpret special studies	N	N	N
*3.	Evaluate findings and diagnose	N	N	N
*4.	Explain findings and nature of HBP control	N	N	N

Perceived barriers.

*Legal restrictions.

Function C-6 -- Subobjective: To refer to therapy

1. Triggers

Diagnosis of HBP from function C-5 (to evaluate and diagnose correctly) when diagnosing provider is not the same as the provider who will provide treatment

NOTE: If diagnosing and treating provider are the same, this function is not appropriate and the reader should proceed to function C-7 for a continuation of the discussion.

2. Outcomes

a. Patient

- Patient linked with provider who will provide treatment aimed at attaining control of the patient's HBP

- Patient who has been provided with information as to the respective roles of the diagnosing and treating providers

b. Data

- Findings and diagnosis from function C-5

- Time and date of initial appointment for therapy

- Record of referral made

c. Provider

- An accepting provider who has agreed to treat a patient

- A referring provider who has communicated diagnostic and other significant information to the accepting provider

3. Activities

a. Refer patient to provider who will treat HBP

b. Confirm that referred patient keep appointment

c. Followup referred patient who did not keep appointment

Function 6. Subobjective: To refer to therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Refer patient	P	P	C,P and S	P
2. Establish tickler to followup referrals	P and S	S and C	A,S and C	S and C
3. Followup referred patients who did not report	P	S and C	S and C	S and C

DENTISTRY

Function 6. Subobjective: To refer to therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Refer patient	N	A	P
2. Establish tickler to followup referrals	N	N	N
3. Followup referred patients who did not report	N	A	P

NURSING

Function 6. Subobjective: To refer to therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Refer patient	A,P and S	P and A	P and A	P
2. Establish tickler to followup referrals	S and P	S	S	P
3. Followup referred patients who did not report	S and P	P and A	S and P	P

Additional comments.

Hospital-Inpatient

1. Refer Patient	P and A
2. Establish Tickler	R and N
3. Followup referred patients who did not report	N (in hospitals that provide followup, this would then become the RN's responsibility

OPTOMETRY

Function 6. Subobjective: To refer to therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Refer patient	N	N	N
2. Establish tickler to followup referrals	N	N	N
3. Followup referred patients who did not report	N	N	N

PHARMACY

Function 6. Subobjective: To refer to therapy

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Refer patient	N	N	P	P
2. Establish tickler to followup referrals	N	N	P	P
3. Followup referred patients who did not report	N	N	P	P

PODIATRY

Function 6. Subobjective: To refer to therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Refer patient	N	P and A	P
2. Establish tickler to followup referrals	N	N	N
3. Followup referred patients who did not report	N	A	P

Function C-7 -- Subobjective: To initiate therapy

1. Triggers

   a. Referral from provider performing functions C-5 and C-6 when that provider is different from the provider who will perform function C-7

   b. Diagnosis of HBP in function C-5 if the same provider is performing function C-5 (diagnose) and function C-7 (initiate therapy)

2. Outcomes

   a. Patient

      - A patient-provider agreed upon target blood pressure

      - Patient with initial commitment to adhere to recommended therapy and adjunctive measures

   b. Data

      - Patient-provider agreed upon target blood pressure

      - Treatment plan, including prescribed medication, other measures

      - Return visit schedule during period of HBP control attainment

   c. Provider

      - Provider with a treatment plan for attaining target blood pressure

3. Activities

   a. Educate patient re: HBP and its complications, importance of therapy, potential compliance difficulties

   b. Set goal for blood pressure reduction

   c. Develop treatment plan (e.g., stepped care)

   d. Recommend adjunctive measures (e.g., salt intake reduction, weight loss, exercise)

   e. Begin program to alleviate pathogenic psychosocial stress

   f. Identify behavioral aids (e.g., biofeedback, meditation, etc.)

   g. Prescribe medication

   h. Handle high blood pressure emergencies

MEDICINE

Function 7. Subobjective: To initiate therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities		Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1.	Set goal for BP reduction	P	P	C,P and S	P
2.	Develop treatment plan (e.g., stepped care)	P and C	P and C	S,P and C	P and C
3.	Educate patient re: HBP, its complications, importance of therapy, potential compliance difficulties	P and S	P and S	A,P and S	P and S
4.	Recommend adjunctive measures	P and C	P and C	S,P and C	P and C
5.	Help alleviate pathogenic psychosocial stress	R	R	P,R,S and C	R
6.	Identify behavioral aids (e.g., biofeedback, meditation, etc.)	R	R	C,R,P and S	R
7.	Handle BHP emergencies	P,S and A	P and S	S,P and S	P and S
8.	Prescribe medication	P	P	P	P

DENTISTRY

Function 7. Subobjective: To initiate therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Set goal for BP reduction	N	N	N
2. Develop treatment plan (e.g., stepped care)	N	N	N
3. Educate patient re: HBP, its complications, importance of therapy, potential compliance difficulties	A	A	N
4. Recommend adjunctive measures	N	N	N
5. Help alleviate pathogenic psychosocial stress	N	A	N
6. Identify behavioral aids (e.g., biofeedback, meditation, etc.)	N	N	N
*7. Handle BHP emergencies	R and A	R and A	R and A
8. Prescribe medication	N	N	N

Perceived barriers.

Dentists' training re HBP emergencies.

Additional comments.

*The group considered alternatives to R and A in HBP emergencies but, concluded that referral to a source of care and assistance in contacting that source was all that was appropriate and possible.

NURSING

Function 7. Subobjective: To initiate therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D* (VNA)
1. Set goal for BP reduction	A	A	A	A
2. Develop treatment plan (e.g., stepped care)	A	A	A	A
3. Educate patient re: HBP, its complications, importance of therapy, potential compliance difficulties	S,P,A and R	P,A and R	P,A and R	P
4. Recommend adjunctive measures	P and A	P and A	P and A	P
5. Help alleviate pathogenic psychosocial stress	S,P,A and R	P,A and R	P,A and R	A and R
6. Identify behavioral aids (e.g., biofeedback, meditation, etc.)	P,R and A	R and A	R and A	R and A
7. Handle BHP emergencies	A,C and R	A	A	R and A
8. Prescribe medication	N	N	N	N

Additional comments.

*In some instances the entrance of the visiting nurse will occur at a later phase rather than at the initial phase.

OPTOMETRY

Function 7. Subobjective: To initiate therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1.	Set goal for BP reduction	N	N	N
2.	Develop treatment plan (e.g., stepped care)	N	N	N
3.	Educate patient re: HBP, its complications, importance of therapy, potential compliance difficulties	A	A	A
4.	Recommend adjunctive measaures	N	N	N
5.	Help alleviate pathogenic psychosocial stress	N	A	A
6.	Identify behavioral aids (e.g., biofeedback, meditation, etc.)	N	N	N
7.	Handle BHP emergencies	R and A	P	P
8.	Prescribe medication	N	N	N

PHARMACY

Function 7. Subobjective: To initiate therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C* (Hosp.)	Setting D* (CHC)
1. Set goal for BP reduction	N	N	A and C	A and C
2. Develop treatment plan (e.g., stepped care)	N	N	A and C	A and C
3. Educate patient re: HBP, its complications, importance of therapy, potential compliance difficulties	A	A	P,A and C	P,A and C
4. Recommend adjunctive measures	N	N	A and C	A and C
5. Help alleviate pathogenic psychosocial stress	N	N	R	R
6. Identify behavioral aids (e.g., biofeedback, meditation, etc.)	N	N	R	R
7. Handle BHP emergencies	R and A	R and A	A,C and R	A,C and R
8. Prescribe medication	C	C	A and C	A and C

Additional comments.

*Clinical pharmacist may be given role as part of health care team, in a given institution.

Function 7. Subobjective: To initiate therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Set goal for BP reduction	N	N	N
2. Develop treatment plan (e.g., stepped care)	N	N	N
3. Educate patient re: HBP, its complications, importance of therapy, potential compliance difficulties	A	A	A
4. Recommend adjunctive measures	N	N	N
5. Help alleviate pathogenic psychosocial stress	N	A	A
6. Identify behavioral aids (e.g., biofeedback, meditation, etc.)	N	N	N
7. Handle BHP emergencies	R and A	R and A	R and A
8. Prescribe medication	N	A	N

4. Additional Recommendations

The task force recommends that physician assistants and nurse practitioners not be permitted to prescribe medication for high blood pressure control without a physician's approval and where states permit the prescription of drugs by NP's and PA's, those laws or regulations should be revised to be consistent with this recommendation.

Function C-8 -- Subobjective: To fill drug prescription

1. Trigger

   Prescription from prescribing provider

2. Outcomes

   a. Patient

      - Patient with filled prescription that is consistent with prescribing provider's orders and efficacious drug therapy for HBP

      - Patient with understanding of how to comply with drug therapy and the importance of continuing complicance

   a. Data

      - Prescription record (date, drug(s) dispensed, dose, schedule, quantity, refill date, patient name and address, prescriber's information)

      - Medication history for legend and nonlegend drugs, drug sensitivities, allergies

      - Reminder dates for next refill

   b. Provider

      Provider who has dispensed medication in accordance with prescribing provider's orders and efficacious drug therapy for HBP

3. Activities

   a. Consider possible drug interactions

   b. Consider adverse reactions

   c. Consider efficacy of drugs

   d. Fill and record prescription

   e. Instruct patient

   f. Establish or update medication records

   g. Establish followup date with patient

MEDICINE

Function 8. Subobjective: To fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Consider possible drug interactions	P	P	P and A	P
2. Instruct patient	S and P	S and P	S,P and A	S and P
3. Consider adverse reactions	P	P	P and A	P
4. Consider efficacy of drugs	P	P	P,A and C	P
*5. Dispense medication	P	P	P,R and A	P
**6. Establish medication records	S and P	S and P	S and P	S and P
7. Establish followup date with patient	P	P	P and S	P

Additional comments.

* On urgent or emergency basis only, and then only in accord with state laws regarding labeling. As a general rule, physicians should avoid dispensing medications for long-term use.

**Includes nurses notes.

Function 8. Subobjective: To fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Consider possible drug interactions	N	A	N
2. Instruct patient	N	A	N
3. Consider adverse reactions	N	A	N
4. Consider efficacy of drugs	N	N	N
5. Dispense medication	N	N	N
6. Establish medication records	N	A	N
7. Establish follow-up date with patient	N	A	N

Perceived barriers.

Dentist has no way of knowing about prescribed drugs the patient is taking.

Additional comments.

Although the dentist has no involvement in this function, the dentist may review and instruct patients regarding drugs related to dental treatment. The dentist should document his or her record with regard to drugs administered by the dentist. Dental drug history form should be signed as a legal precaution.

NURSING

Function 8. Subobjective: To fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Consider possible drug interactions	C	C	C	P
2. Instruct patient	P and S	P	P	P
3. Consider adverse reactions	P and C*	P and C*	P and C*	P and C*
4. Consider efficacy of drugs	A	A	A	P
5. Dispense medication	N	N	N	N
6. Establish medication records	N	N	N	P**
7. Establish followup date with patient	A	N	N	P**

Additional comments.

* If no other professionals are available.

**Nurses should document only.

OPTOMETRY

Function 8. Subobjective: To fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1.	Consider possible drug interactions	N	N	N
2.	Instruct patient	N	N and A	N
3.	Consider adverse reactions	N	N and A	N and A
4.	Consider efficacy of drugs	N	N	N
5.	Dispense medication	N	N	N
6.	Establish medication records	N	N	N
7.	Establish followup date with patient	N	N	N

PHARMACY

Function 8. Subobjective: To fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Consider possible drug interactions	P	P	P	P
2. Instruct patient	P	P	P	P
*3. Consider adverse reactions	C	C	P	P
**4. Consider efficacy of drugs	P	P	P	P
5. Dispense medication	P	P	P	P
6. Establish medication records	P	P	P	P
7. Establish followup date with patient	N	N	P	P
8. Prepare special dosage forms	N	N	P	P

Additional comments and questions for discussion.

* Consult with the physician if there is concern on the part of the pharmacist.

**When medications are available from multiple sources and physician doesn't require a particular brand, pharmacist must dispense most efficacious.

PODIATRY

Function 8. Subobjective: To fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
*1.	Consider possible drug interactions	N	A	N
2.	Instruct patient	N	A	N
*3.	Consider adverse reactions	N	A	N
4.	Consider efficacy of drugs	N	N	N
5.	Dispense medication	N	N	N
6.	Establish medication records	N	A	N
7.	Establish followup date with patient	N	A	N

Perceived barriers.

*Legal restrictions.

4. Additional Recommendations

a. The task force recommends that every patient be guaranteed continuity of care from diagnosis through therapy and maintenance, and that medical record-keeping be maintained in a manner supportive of care continuity.

b. The task force recommends that private third-party payors be encouraged to include antihypertensive medications and treatments in their most widely utilized benefits packages.

c. The task force recommends that the Medicare program be expanded to include drug coverage for antihypertensive medications.

Function C-8a -- Subobjective: To provide patient services related to adjunctive (e.g., weight reduction, exercise, reeducation of sodium intake, etc.) and behavioral approaches (e.g., relaxation, biofeedback, meditation, etc.)

1. Trigger

   a. Recommend use of these approaches by the provider managing the patient's therapy

   b. Patient initiated use

2. Outcomes

   a. Patient

      - Patient who has been provided with and is using a systematic approach to adopting lifestyle changes or who has been linked with a resource that aids in adopting lifestyle changes

      - Patient who has been provided with and is using a systematic approach to adopting behavioral aids in HBP control or who has been linked with a resource that aids in utilizing behavioral approaches

   b. Data

      - (Adjunctive factors) Specific performance goals (e.g., reduce weight by x percent, reduce sodium intake by y grams per day, engage in an average of z number of minutes of exercise per day) that have been adopted by the patient

      - Compilation of resources and methods to be used in the attainment of the adjunctive factors

      - (Behavioral approaches) Specific performance goals (e.g., participate in "x" biofeedback learning sessions per "T" unit of time) that have been adopted by the patient

      - Compilation of resources and methods to be used in the attainment of the behavioral approaches

      - Followup dates to assess effectiveness of the approaches

   c. Provider

      Provider who has documented in his/her records the goals, the resources to be used and the followup dates

3. Activities

   a. Refer to service

   b. Agree on goals

   c. Include family and others in support system

   d. Provide service

MEDICINE

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Refer to service	S and P	S and P	S and P	S and P
2. Agree on goals	P	P	P and C	P
3. Include family and others in support system	A	A	A,P and S	A
4. Provide service	R	R	C,R,P and S	R

DENTISTRY

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Refer to service	N	A	N
2. Agree on goals	N	N	N
3. Include family and others in support system	N	A	A
*4. Provide service	N	A	A

Additional comments.

*Assist in educational activities. Within CHC and hospital, educational aspects should be coordinated and communicated within a known and accepted protocol.

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Refer to service	P,S and C	P	P	P
2. Agree on goals	P and C	P	P	P
3. Include family and others in support system	P,S and C	P	P	P
4. Provide service	P and C	P	P	P

Additional comments.

The school systems should include education regarding HBP in grades 1-12.

OPTOMETRY

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Refer to service	N	R,P and C	R
2. Agree on goals	N	A	R
3. Include family and others in support system	N	P,R and C	R
4. Provide service	N	P,R and C	R

PHARMACY

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Refer to service	N	N	A*	A*
2. Agree on goals	N	N	A*	A*
3. Include family and others in support system	N	N	A*	A*
4. Provide service	N	N	A*	A*

Additional comments.

*Clinical pharmacist would be involved as member of health care team.

PODIATRY

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Refer to service	N	A	N
2. Agree on goals	N	N	N
3. Include family and others in support system	N	A	A
4. Provide service	N	A	A

4. Additional Recommendations

The task force recommends that the nutritional programs and practices of institutions feeding large concentrations of blacks, such as penal, mental, geriatric, educational and military facilities, be evaluated for their compatibility with high blood pressure control recommendations endorsed by the NBHPTF.

176

5. Additional Recommendations - Nutrition

The task force concurs in the statement on the role of dietary management approved by the National High Blood Pressure Education Program Coordinating Committee, published in March 1979. The special recommendations contained in the statement, which were prepared for physicians and other providers, are as follows:

- Weight reduction should be routinely considered in the treatment of overweight borderline hypertensives, both for its potential in lowering blood pressure and for its general health benefits.

- Practitioners should encourage weight reduction for the obese hypertensive patient and, if blood pressure is reduced to and maintained at normal levels, it should be used as definitive therapy.

- For overweight patients who experience significant side effects from drugs, weight reduction should be considered as adjunctive therapy to help reduce drug dosage.

- Persons with a family history of hypertension should avoid excessive weight gain and reduce if overweight.

- Prevention or control of obesity in the young should be regarded as having positive health benefits and as a possible preventive step for hypertension.

- Practitioners should recommend a gradual weight loss over time. Drastic weight loss and fad dieting should be discouraged. Practitioners recommending weight reduction should seek to identify a regimen that incorporates realistic goals for each overweight hypertensive. Practitioners should ensure that adequate dietary information is provided.

- Research into the mechanisms relating to body weight and hypertension should be pursued.

- Efforts should be continued and expanded to improve patient education and nutrition, to improve dietary counseling for weight reduction, and to improve motivational techniques for adherence to diet therapy.

- A CAVEAT: The goal of weight reduction in hypertension therapy is to lower blood pressure to normal or near normal levels. If reduced caloric intake does not achieve weight loss adequate drug therapy should be used.

6. Recommendations for Sodium Intake

- Moderate sodium restriction should be routinely considered as a possible element in the treatment of all hypertensives.
- Practitioners should encourage sodium restriction, and if blood pressure is reduced to and maintained at normal levels, it should be used as definitive therapy
- For patients who experience significant side effects from drugs, sodium restriction should be considered as adjunctive therapy to help reduce drug dosages or increase drug efficacy.
- Persons with a family history of hypertension should be encouraged to restrict sodium intake.
- Practitioners recommending sodium restriction should indicate specific diets appropriate to each patient's condition and lifestyle and should ensure that the diet is explained satisfactorily.
- Labeling of sodium content in foods should be encouraged and the development of labeling regulations should be supported.
- Research on the role of sodium in the etiology and treatment of hypertension should be pursued.
- Efforts should be continued and expanded to improve patient education in dietary sodium intake and to improve motivational techniques for long-term adherence to diet therapy.
- A CAVEAT: The goal of sodium restriction in hypertension therapy is to lower blood pressure to normal or near normal levels. If sodium restriction does not achieve this goal, adequate drug therapy should be used.

178

Function C-9 -- Subobjective: (Patient) to follow through with therapy as recommended

1. Triggers

   Completion of functions C-7 (provider initiation of therapy), C-8 (provider filling of prescription), C-8a (provision of additional services)

   This function is performed by the patient

2. Outcomes

   a. Patient

      - Patient who is complying with drug regimen as prescribed

      - Patient who is adhering to lifestyle changes recommended by the provider

      - Patient whose HBP controls are being abetted by any recommended use of behavioral approaches

   b. Data

      - Blood pressure measurements obtained by patient of family when recommended by the provider

      - Patient's or service organization's records or notes on adherence to therapy

      - Patient's reasons for noncompliance

   c. Provider

      - Providers who are reinforcing and assisting patient with compliance

3. Activities

   a. Take medication

   b. Change elements of lifestyle

   c. Follow behavioral approaches as aids in control

MEDICINE

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Take medication	A	A	A and S	A
2. Change elements of lifestyle	R and A	A	R,A and C	A
3. Follow behavioral approaches as aids in control	A and R	A and R	C,A and R	A and R

DENTISTRY

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
*1.	Take medication	A	A	A
2.	Change elements of lifestyle	N	N	N
3.	Follow behavioral approaches as aids in control	N	N	N

Additional comments.

*Reinforce patient regarding the importance of compliance.

COMMENT: The group felt many dentists could be motivated to assist in this activity. Also, no mandated system would work in solo practice. A remuneration mechanism might encourage mass involvement of dentists.

NURSING

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Take medication	S and A	S and A	S and A	S and A
2. Change elements of lifestyle	S and A	R and A	R and A	R and A
3. Follow behavioral approaches as aids in control	S and A	R,A and S	R,A and S	A

OPTOMETRY

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Take medication	A	A	A
2. Change elements of lifestyle	N	N	N
3. Follow behavioral approaches as aids in control	N	A	A

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Take medication	A	A	A	A
2. Change elements of lifestyle	N	N	R	R
3. Follow behavioral approaches as aids in control	N	N	R	R

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1.	Take medication	A	A	A
2.	Change elements of lifestyle	N	A	N
3.	Follow behavioral approaches as aids in control	N	N	N

4. Additional Recommendations

The task force recommends that greater recognition and utilization be made of professionals trained as health educators who are not clinicians.

Such health educators may be of significant value in planning and implementing programs to encourage patient adherence to antihypertensive regimens. Such efforts should be coordinated closely with physicians who are managing the hypertensive patients.

Function C-10 -- Subobjective: To monitor prescribed therapy

1. Triggers

   Periodic followup encounters (patient initiated or provider initiated)

2. Outcomes

   a. Patient

      - Patient who has: been assessed regarding level of compliance; articulated known reasons for noncompliance; been given reinforcement for compliance; been counseled on life long nature of blood pressure control and other appropriate matters

   b. Data

      - Blood pressure reading(s) vs. goal blood pressure

      - Results of followup physical exam and laboratory tests

      - Level of compliance and reasons for noncompliance

   c. Provider

      - Provider with defendable basis for continuing or modifying therapy program

3. Activities

   a. Organize return visits program

   b. Ascertain side effects problems

   c. Measure blood pressure for progress toward goal

   d. Conduct followup history/physical

   e. Help patient to improve compliance

   f. Ascertain resolution of psychosocial stress

   g. Followup on dropouts and fadeouts

   h. Counsel patient on distinction between "control" and "cure"

   i. Counsel patient on distinction between "nervous tension" and hypertension

MEDICINE

Function 10. Subobjective: To monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Organize return visits program	S and P	S and P	S and P	S and P
2. Ascertain side effects problems	S and P	S and P	S,P and A	S and P
3. Measure BP for progress toward goal	P and S	P and S	P and S	P and S
4. Conduct followup history/physical	P and S	P and S	A,P and S	P and S
5. Help patient to improve compliance	S and A	A	R,A,S and P	A
6. Ascertain resolution of psychosocial stress	A and R	A and R	C,A,R and P	A and R
7. Followup on dropouts and fadeouts	A	A	R and S	S
8. Counsel patient on distinction between "control" and "cure"	P and S	P	A and P	P
9. Counsel patient on distinction between "nervous tension" and hypertension	P and S	P and S	P,A and S	P and S

DENTISTRY

Function 10. Subobjective: To monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.D.C.)
1.	Organize return visits program	N	N	N
2.	Ascertain side effects problems	R	A	A
3.	Measure BP for progress toward goal	P	A	A
4.	Conduct followup history/physical	N	N	N
5.	Help patient to improve compliance	P	A	A
6.	Ascertain resolution of psychosocial stress	N	N	N
7	Followup on dropouts and fadeouts	N	A	A
8.	Counsel patient on distinction between "control" and "cure"	P	A	A
9.	Counsel patient on distinction between "nervous tension" and hypertension	P	A	[illegible]

NURSING

Function 10. Subobjective: To monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities		Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
*1.	Organize return visits program		S,A and P	S	S	P
2.	Ascertain side effects problems		S,A and P	P	P	P
3.	Measure BP for progress toward goal		S,A and P	P and S	P and A	P
4.	Conduct followup history/physical	RN's P(hist)	A(physical), S	P(h), A(p)	P(h), A(p)	P and A (per MD order
		NP's P(hist)	P(physical), S	P(h), P(p)	P(h), P(p)	P and A (per MD order
5.	Help patient to improve compliance		P and R	P and R	P and R	P and R
6.	Ascertain resolution of psychosocial stress		R	R	R	P and R
**7.	Followup on dropouts and fadeouts		S,A and P	P	S and P	P
***8.	Counsel patient on distinction between "control" and "cure"		P	P	S and P	P
9.	Counsel patient on distinction between "nervous tension" and hypertension		C,P and R	R and P	S and P	P

Additional comments.
* Hospital Inpatient = Nurse supervises
**Hospital Inpatient = Nurse has no role

***Hospital Inpatient = nurse performs
The role of the extended role nurse (activity 4, "NP's") is yet to be fully determined.

OPTOMETRY

Function 10. Subobjective: To monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Organize return visits program	N	N	N
2. Ascertain side effects problems	A and R	N	N
3. Measure BP for progress toward goal	P	A and P	A
4. Conduct followup history/physical	N	N	N
5. Help patient to improve compliance	P	A and P	A and P
6. Ascertain resolution of psychosocial stress	N	A	A
7. Followup on dropouts and fadeouts	N	A	A
8. Counsel patient on distinction between "control" and "cure"	N	A	N
9. Counsel patient on distinction between "nervous tension" and hypertension	N	A	N

PHARMACY

Function 10. Subobjective: To monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A	Setting B	Setting C	Setting D
1. Organize return visits program	A	A	P*	P*
2. Ascertain side effects problems	A and C	A and C	P*	P*
3. Measure BP for progress toward goal	P	P	P*	P*
4. Conduct followup history/physical	N	N	P*	P*
5. Help patient to improve compliance	P	P	P*	P*
6. Ascertain resolution of psychosocial stress	N	N	P*	P*
7. Followup on dropouts and fadeouts	N	N	P*	P*
8. Counsel patient on distinction between "control" and "cure"	P	P	P*	P*
9. Counsel patient on distinction between "nervous tension" and hypertension	P	P	P*	P*

Additional comments.
*Involvement of clinical pharmacist will depend upon policies and procedures of the institution. It is possible that in some institutions, the clinical pharmacist might be responsible for monitoring a group of patients.

PODIATRY

Function 10. Subobjective: To monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1.	Organize return visits program	N	N	N
2.	Ascertain side effects problems	R and A	A	A
3.	Measure BP for progress toward goal	P	A	A
4.	Conduct followup history/physical	N	N	N
5.	Help patient to improve compliance	P	A	A
6.	Ascertain resolution of psychosocial stress	N	N	A
7.	Followup on dropouts and fadeouts	N	A	A
8.	Counsel patient on distinction between "control" and "cure"	P	A	A
9.	Counsel patient on distinction between "nervous tension" and hypertension	p	A	A

4. Additional Comments

One of the consultants engaged by the NBHPTF reviewed the matter of emergency room involvement in monitoring high blood pressure therapy with providers in a representative site. Their opinions were that emergency rooms, which serve de facto as a form of primary care (albeit crisis oriented) for many persons, do not constitute the preferred site for routine high blood pressure treatment and control. A differing experience was suggested by a physician formerly with a large Chicago teaching institution. In that setting, the physician reported to the NBHPTF representative that:

> "The emergency room (ER) program contains a comprehensive triage system which is based upon a medical history, life-style and risk factors analysis, and a physical examination. The patient is counseled, and referred to a treatment unit if indications warrant. A continuous loop feedback system keeps the ER and the treatment unit aware of patient compliance and progress, since the noncompliant patient often appears subsequently at the ER under emergent conditions. Therefore, the ER outreach staff attempts to reduce the emergent census by locating and encouraging the non-compliant patient to resume treatment."

201

Function C-11 -- Subobjective: To adjust therapy (as determined)

1. Triggers

    a. Unacceptable side effects

    b. Clinical indications

2. Outcomes

    a. Patient

        - Patient with: controlled blood pressure consistent with initial or adjusted goal, an acceptable level of side effects, and reduced probability of complications of HBP

    b. Date

        - Adjusted blood pressure goal

        - Adjusted treatment plan

        - Adjusted return visit schedule

3. Activities

    a. Adjust drug dosage

    b. Obtain adjunctive lifestyle changes

    c. Establish followup date and method

MEDICINE

Function 11. Subobjective: To adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Adjust drug dosage	P and C	P and C	P,S and C	P and C
2. Encourage and support adjunctive lifestyle changes	A and R	A and R	A,P,C and R	A and R
3. Establish followup date and method	P and C	P and C	P,A,S and C	P and C

DENTISTRY

Function 11. Subobjective: To adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Adjust drug dosage	R	N	N
2. Encourage and support adjunctive lifestyle changes	N	N	N
3. Establish followup date and method	N	N	N

NURSING

Function 11. Subobjective: To adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Adjust drug dosage	N	N**	N**	R
2. Encourage and support adjunctive lifestyle changes	P,A and C	P and R	P and R	P
*3. Establish followup date and method	P,S and A	P	S and P	P

Additional comments.

* Hospital inpatient = nurse refers and consults.

**Extended role nurse may have a role in some settings. This must be defined.

Function 11. Subobjective: To adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Adjust drug dosage	R	N	N
2. Encourage and support adjunctive lifestyle changes	N	A	N
3. Establish followup date and method	N	N	N

PHARMACY

Function 11. Subobjective: To adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Adjust drug dosage	R	R	P or C*	P or C*
2. Encourage and support adjunctive lifestyle changes	N	N	P or C*	P or C*
3. Establish followup date and method	N	N	P or C*	P or C*

Additional comments.

*Dependent upon latitude given by the institution, a clinical pharmacist may be assigned some of these responsibilites as a member of a health care team.

Function 11. Subobjective: To adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Adjust drug dosage	R	N	N
2. Encourage and support adjunctive lifestyle changes	N	N	N
3. Establish followup date and method	N	N	N

4. Additional Recommendations

a. The task force recommends that physician assistants and nurse practitioners not be permitted to prescribe medication for high blood pressure control without a physician's approval and where states permit the prescription of drugs by NP's and PA's, those laws or regulations should be revised to be consistent with this recommendation.

b. The task force recommends that high blood pressure patients in the black community being serviced by nurse practitioners and physician assistants be required to be seen by a physician at least once a year.

C. **Maintenance Functions**

Objective: To continue correct therapy on patients who start therapy

Function M-12 -- Subobjective: To continue to fill prescription

1. **Trigger**
    a. Patient has exhausted supply

    b. Refill date has arrived

    c. Prescribing provider has modified drug regimen and has issued a new prescription

2. **Outcomes**
    a. Patient
        - Patient with filled prescription that is consistent with prescribing provider's orders and efficacious drug therapy for HBP
        - Patient with understanding of how to comply with drug therapy and the importance of continuing compliance

    b. Data
        - Prescription record (date, drug(s) dispensed, dose, schedule, quantity, refill date, patient name and address, prescriber's information)
        - Medication history for legend and nonlegend drugs, drug sensitivity, allergies
        - Reminder dates for next refill

    c. Provider
        - Provider who has dispensed medication in accordance with prescribing provider's orders and efficacious drug therapy for HBP

3. **Activities**
    a. Consider possible drug interactions

    b. Consider adverse reactions

    c. Consider efficacy of drugs

    d. Dispense medication and record prescription

e. Instruct patient

f. Establish or update medication records

g. Establish followup date with patient

MEDICINE

Function 12. Subobjective: To continue to fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Consider possible drug interactions	P	P	P and C	P
2. Instruct patient	S and P	S and P	S,C,A and P	S and P
3. Consider adverse reactions	P	P	P and C	P
4. Consider efficacy of drugs	P	P	P and C	P
*5. Dispense medication	P	P	P	P
**6. Establish medication records	S and P	S and P	S and P	S and P
7. Establish followup date with patient	P	P	P and S	P

Additional comments.

* On urgent or emergency basis only and then only in accord with state laws regarding labeling. As a general rule, physicians should avoid dispensing medications for long-term use.

**Includes nurses notes.

DENTISTRY

Function 12. Subobjective: To continue to fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A* (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Consider possible drug interactions	N	A	N
2. Instruct patient	N	A	N
3. Consider adverse reactions	N	A	N
4. Consider efficacy of drugs	N	A	N
5. Dispense medication	N	N	N
6. Establish medication records	N	A	N
7. Establish followup date with patient	N	A	N

Additional comments.

*Although the dentist has no involvement in this function, the dentist may review and instruct patients regarding drugs related to dental treatment. The dentist should document his or her record with regard to drugs administered by dentist. Dental drug history form should be signed as legal precaution.

NURSING

Function 12. Subobjective: To continue to fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting (VNA)
1. Consider possible drug interactions	C and R	C	C	P
2. Instruct patient	P	P	P	P
3. Consider adverse reactions	P and C*	P and C*	P and C*	P and C*
4. Consider efficacy of drugs	A	A	A	P
5. Dispense medication	N	N	N	N
6. Establish medication records	N	N	N	P**
7. Establish followup date with patient	C,P and S	N	N	P**

Additional comments.

* If no other professionals are available.

**Nurses should document only.

OPTOMETRY

Function 12. Subobjective: To continue to fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Consider possible drug interactions	N	N	N
2. Instruct patient	N	A	A
3. Consider adverse reactions	N	N	N
4. Consider efficacy of drugs	N	A	A
5. Dispense medication	N	N	N
6. Establish medication records	N	N	N
7. Establish followup date with patient	N	N	N

PHARMACY

Function 12. Subobjective: To continue to fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Consider possible drug interactions	P	P	P	P
2. Instruct patient	P	P	P	P
*3. Consider adverse reactions	C	C	P	P
**4. Consider efficacy of drugs	P	P	P	P
5. Dispense medication	P	P	P	P
6. Establish medication records	P	P	P	P
7. Establish followup date with patient	N	N	P	P
8. Prepare special dosage forms	N	N	P	P

Additional comments.

* Consult with the physician if there is concern on the part of the pharmacist.

**When medications are available from multiple sources and physician doesn't require a particular brand, pharmacist must dispense most efficacious.

PODIATRY

Function 12. Subobjective: To continue to fill prescription
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1.	Consider possible drug interactions	N	A	N
2.	Instruct patient	N	A	N
3.	Consider adverse reactions	N	A	N
4.	Consider efficacy of drugs	N	A	N
5.	Dispense medication	N	A	N
6.	Establish medication records	N	A	N
7.	Establish followup date with patient	N	A	N

4. Additional Recommendations

a. The task force recommends that every patient be guaranteed continuity of care from diagnosis through therapy and maintenance, and that medical record-keeping be maintained in a manner supportive of care continuity.

b. The task force recommends that private third-party payors should be encouraged to include antihypertensive medications and treatments in their most widely utilized benefits packages.

c. The task force recommends that the Medicare program should be expanded to include drug coverage for antihypertensive medications.

Function M-12a -- Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

1. **Triggers**

   Determination that patient could benefit from continuation of services

2. **Outcomes**

   a. Patient

   - Patient who has been provided with and is using systematic approach to adopting lifestyle changes or who has been linked with a resource that aids in adopting lifestyle changes

   - Patient who has been provided with and is using systematic approach to adopting behavioral aids in HBP control or who has been linked with resources that aid in utilizing behavioral approaches

   b. Data

   - (Adjunct factors) Specific performance goals (e.g., reduce weight by x percent, reduce sodium intake by y grams per day, engage in an average of z number of minutes of exercise per day) that have been adopted by the patient

   - Compilation of resources and methods to be used in the attainment of the performance goals

   - (Behavioral approaches) Specific performance goals (e.g., participate in "x" biofeedback learning sessions per "T" unit of time) that have been adopted by the patient

   - Compilation of resources and methods to be used in the attainment of the performance goals

   - Followup dates to assess effectiveness of the approaches

   c. Provider

   Provider who has documented in his/her records the goals, the resources to be used and the followup dates

3. Activities

   a. Refer to service

   b. Agree on goals

   c. Include family and others in support system

   d. Provide service

MEDICINE

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Refer to service	S and P	S and P	S and P	S and P
2. Agree on goals	P	P	P and C	P
3. Include family and others in support system	A	A	A,P and S	A
4. Provide service	R	R	C,R,P and S	R

DENTISTRY

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Refer to service	N	A	N
2. Agree on goals	N	N	N
3. Include family and others in support system	N	A	A
*4. Provide service	N	A	A

Additional comments.

*Assist in educational activities. Within CHC and hospital, educational aspects should be coordinated within a known and accepted protocol.

NURSING

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Refer to service	P,S and C	P	P	P
2. Agree on goals	P and C	P	P	P
3. Include family and others in support system	P,S and C	P	P	P
4. Provide service	P and C	P	P	P

Additional comments.

The school systems should include education regarding HBP in grades 1-12.

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Refer to service	N	R,P and C	R
2. Agree on goals	N	A	A
3. Include family and others in support system	N	P,R and C	R
4. Provide service	N	P,R and C	R

PHARMACY

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Refer to service	N	N	A*	A*
2. Agree on goals	N	N	A*	A*
3. Include family and others in support system	N	N	A*	A*
4. Provide service	N	N	A*	A*

PODIATRY

Function 12A Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Refer to service	N	A	N
2. Agree on goals	N	N	N
3. Include family and others in support system	N	A	A
4. Provide service	N	A	A

4. Additional Recommendations

The task force recommends that the nutritional programs and practices of institutions feeding large concentrations of blacks, such as penal, mental, geriatric, educational and military facilities, be evaluated for their compatibility with high blood pressure control recommendations endorsed by the NBHPTF.

240

Function M-13 -- Subobjective: (Patient) To continue to follow-through therapy as recommended

1. Triggers

Patient's continuing motivation plus activities of providers in functions M-12 (continue to fill prescriptions), M-12a (continue to provide services related to adjunctive measures)

2. Outcomes

a. Patient

- Patient who is complying with drug regimen as prescribed
- Patient who is adhering to lifestyle changes as recommended by the provider
- Patient whose HBP controls are being abetted by a recommended use of behavioral approaches

b. Data

- Blood pressure measurements obtained by patient or family when recommended by the provider
- Patient's or service organization's records or notes on adherence to therapy
- Patient's reasons for noncompliance

c. Provider

- Providers who are reinforcing and assisting patient with compliance

3. Activities

a. Take medication

b. Change elements of lifestyle

c. Follow behavioral approaches as aids in control

MEDICINE

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Take medication	A	A	A	A
2. Change elements of lifestyle	R and A	A	S and A	A
3. Follow behavioral approaches as aids in control	A and R	A and R	C,S,A and R	A and R

DENTISTRY

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
*1. Take medication	A	A	A
2. Change elements of lifestyle	N	N	N
3. Follow behavioral approaches as aids in control	N	N	N

Additional comments.

*Reinforce patient regarding the importance of compliance.

Comment: The group felt many dentists could be motivated to assist in this activity. Also, no mandated system would work in solo practice. A remuneration mechanism might encourage mass involvement of dentists.

NURSING

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Take medication	S and A	S and A	S and A	S and A
2. Change elements of lifestyle	S,A and C	R and A	R and A	R and A
3. Follow behavioral approaches as aids in control	S and A	R,A and S	R,A and S	P

OPTOMETRY

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Take medication	A	A	A
2. Change elements of lifestyle	A	A	N
3. Follow behavioral approaches as aids in control	N	A	A

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Take medication	A	A	A	A
2. Change elements of lifestyle	N	N	N	N
3. Follow behavioral approaches as aids in control	N	N	N	N

PODIATRY

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Take medication	A	A	A
2. Change elements of lifestyle	N	A	N
3. Follow behavioral approaches as aids in control	N	A	A

Function M-14 -- Subobjective: To continue to monitor recommended therapy

1. **Trigger**

   Periodic followup encounters

2. **Outcomes**

   a. Patient

      Patient who has: been assessed regarding level of compliance; articulated known reasons for noncompliance; been given reinforcement for compliance; been counseled on lifelong nature of blood pressure control and other appropriate matters

   b. Data

      - Blood pressure reading(s) vs. goal blood pressure
      - Results of followup physical exam and laboratory tests
      - Level of compliance and reasons of noncompliance

3. **Activities**

   a. Organize return visits program

   b. Ascertain side effects problems

   c. Measure blood pressure for progress toward goal

   d. Conduct followup history/physical

   e. Help patient to improve compliance

   f. Ascertain resolution of psychosocial stress

   g. Followup on dropouts and fadeouts

   h. Counsel patient on distinction between "control" and "cure"

   i. Counsel patient on distinction between "nervous tension" and hypertension

MEDICINE

Function 14. Subobjective: To continue to monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Organize return visits program	S and P	S and P	S and P	S and P
2. Ascertain side effects problems	S and P	S and P	A,S and P	S and P
3. Measure BP for progress toward goal	P and S	P and S	C,P and S	P and S
4. Conduct followup history/physical	P and S	P and S	A,P and S	P and S
5. Help patient to improve compliance	S and A	A	P,A and C	A
6. Ascertain resolution of psychosocial stress	A and R	A and R	P,A and R	A and R
7. Followup on dropouts and fadeouts	S	S	A and S	S
8. Counsel patient on distinction between "control" and "cure"	P and S	P	A,P and S	P
9. Counsel patient on distinction between "nervous tension" and "hypertension"	P and S	P and S	P,A and S	P and S

Additional comments.

Continuity of care should be maintained.

DENTISTRY

Function 14. Subobjective: To continue to monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.
1. Organize return visits program	N	N	N
2. Ascertain side effects problems	A and R	A	A
3. Measure BP for progress toward goal	P	A	A
4. Conduct followup history/physical	N	N	N
5. Help patient to improve compliance	P	A	A
6. Ascertain resolution of psychosocial stress	N	N	N
7. Followup on dropouts and fadeouts	N	A	A
8. Counsel patient on distinction between "control" and "cure"	P	A	A
9. Counsel patient on distinction between "nervous tension" and "hypertension"	P	A	A

NURSING

Function 14. Subobjective: To continue on monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

	Activities		Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
*1.	Organize return visits program		S	S	S and P	P
2.	Ascertain side effects problems		S and P	P	P	P
3.	Measure BP for progress toward goal		S,P and C	P and S	P and S	P
4.	Conduct followup history/physical	RN's NP's	P(hist), A (physical) P(hist), P (physical)	P(h), A(p) P(h), P(p)	P(h), A(p) P(h), P(p)	P and A (per MD order P and A (per MD order
5.	Help patient to improve compliance		P and R	P and R	P and R	P and R
6.	Ascertain resolution of psychosocial stress		R and C	R	R	P and R
**7.	Followup on dropouts and fadeouts		S and C	P	S and P	[illegible]
***8.	Counsel patient on distinction between "control" and "cure"		P and C	P	S and P	P
9.	Counsel patient on distinction between "nervous tension" and "hypertension"		C,P and R	R and P	R and P	P

Additional comments.
* Hospital inpatient - nurse supervises
**Hospital inpatient - nurse has no role
***Hospital inpatient - nurse performs
The role of the extended role nurse(activity 4, "NP's") is yet to be fully defined.

OPTOMETRY

Function 14. Subobjective: To continue to monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Organize return visits program	N	N	N
2. Ascertain side effects problems	A and R	A	A
3. Measure BP for progress toward goal	P	P and A	P and A
4. Conduct followup history/physical	N	N	N
5. Help patient to improve compliance	P	A	A
6. Ascertain resolution of psychosocial stress	N	N	N
7. Followup on dropouts and fadeouts	N	A	N
8. Counsel patient on distinction between "control" and "cure"	N	N	N
9. Counsel patient on distinction between "nervous tension" and "hypertension"	N	N	N

PHARMACY

Function 14. Subobjective: To continue to monitor prescribed therapy
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Ind.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Organize return visits program	A	A	P*	P*
2. Ascertain side effects problems	A and C	A and C	P*	P*
3. Measure BP for progress toward goal	P	P	P*	P*
4. Conduct followup history/physical	N	N	P*	P*
5. Help patient to improve compliance	P	P	P*	P*
6. Ascertain resolution of psychosocial stress	N	N	P*	P*
7. Followup on dropouts and fadeouts	N	N	P*	P*
8. Counsel patient on distinction between "control" and "cure"	P	P	P*	P*
9. Counsel patient on distinction between "nervous tension" and "hypertension"	P	P	P*	P*

Additional comments.
*Involvement of clinical pharmacist will depend upon policies and procedures of the institution. It is possible that in some institutions, the clinical pharmacist might be responsible for monitoring a group of patients.

PODIATRY

Function 14. Subobjective: To continue to monitor prescribed therapy

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Organize return visits program	N	N	N
2. Ascertain side effects problems	R and A	A	A
3. Measure BP for progress toward goal	P	A	A
4. Conduct followup history/physical	N	N	N
5. Help patient to improve compliance	P	A	A
6. Ascertain resolution of psychosocial stress	N	A	A
7. Followup on dropouts and fadeouts	N	A	A
8. Counsel patient on distinction between "control" and "cure"	P	A	A
9. Counsel patient on distinction between "nervous tension" and "hypertension"	P	A	A

Function M-15 -- Subobjective: To continue to adjust therapy (as desirable)

1. Trigger

   a. Clinical indications

   b. Unacceptable side effects

2. Outcomes

   a. Patient

      Patient with: controlled blood pressure consistent with initial or adjusted goal; an acceptable level of side effects, and reduced probability of complications of HBP

   b. Data

      - Adjusted blood pressure goal

      - Adjusted treatment plan

      - Adjusted return visit schedule

3. Activities

   a. Adjust drug dosage

   b. Obtain adjunctive lifestyle changes

   c. Establish followup date and method

MEDICINE

Function 15. Subobjective: To continue to adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (CHC)	Setting D (Hosp. OPD)
1. Adjust drug dosage	P and C	P and C	S,P and C	P and C
2. Encourage and support adjunctive lifestyle changes	A and R	A and R	S,A and R	A and R
3. Establish followup date and method	P and C	P and C	S,P and C	P and C

DENTISTRY

Function 15. Subobjective: To continue to adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp. D.C.)
1. Adjust drug dosage	R	N	N
2. Encourage and support adjunctive lifestyle changes	N	N	N
3. Establish followup date and method	N	N	N

Function 15. Subobjective: To continue to adjust therapy (as desirable)

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (CHC)	Setting B (Hosp. OPD)	Setting C (Hosp. ER)	Setting D (VNA)
1. Adjust drug dosage	N	P	P	R
2. Obtain adjunctive lifestyle changes	P and C	P and R	P and R	P
*3. Establish followup date and method	S,A and P	P	S and P	P

Additional comments.

*Hospital inpatient--nurse refers and consults.

OPTOMETRY

Function 15. Subobjective: To continue to adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (Group)	Setting C (HMO)
1. Adjust drug dosage	R	N	N
2. Encourage and support adjunctive lifestyle changes	N	N	N
3. Establish followup date and method	N	N	N

Function 15. Subobjective: To continue to adjust therapy (as desirable)
(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (INd.)	Setting B (Chain)	Setting C (Hosp.)	Setting D (CHC)
1. Adjust drug dosage	R	R	P or C*	P or C*
2. Encourage and support adjunctive lifestyle changes	N	N	P or C*	P or C*
3. Establish followup date and method	N	N	P or C*	P or C*

Additional comments.

*Dependent upon latitude given by the institution, a clinical pharmacist may be assigned some of these responsibilities as a member of a health care team.

PODIATRY

Function 15. Subobjective: To continue to adjust therapy (as desirable)

(A = Assist C = Consult N = None P = Perform R = Refer S = Supervise)

Activities	Setting A (Solo)	Setting B (CHC)	Setting C (Hosp.)
1. Adjust drug dosage	R	N	N
2. Obtain adjunctive lifestyle changes	N	N	N
3. Establish followup date and method	N	N	N

4. Additional Recommendations

a. The task force recommends that physician assistants and nurse practitioners not be permitted to prescribe medication for high blood pressure control without a physician's approval and where states permit the prescription of drugs by NP's and PA's, those laws or regulations should be revised to be consistent with this recommendation.

b. The task force recommends that high blood pressure patients in the black community being serviced by nurse practitioners and physician assistants be required to be seen by a physician at least once a year.

HIGH BLOOD PRESSURE EDUCATION AND CONTROL PROCESS

Commentary on Provider Education

A. Goal

- Obtain desired provider cognitive, attitudinal and behavioral changes in HBP education and control that are consistent with the NBHPTF's role consensus statements

B. Objectives

- Contact at least 60 percent of black providers in each profession to make available information on the current guidelines in HBP education and control as articulated by the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure

- Provide continuing education on high blood pressure education and control to a substantial percentage of providers who serve black patients

- Provide orientation on NBHPTF recommendations to a substantial percentage of black providers in each profession

- Provide orientation to a substantial percentage of nonblack providers who serve black patients (solo and institutional) on the professional role recommendations and other applicable positions of the NBHPTF

C. Some Possible Mechanisms

- Regional workshops for each black health care professional organization

- Regional and local interdisciplinary seminars

- Collaboration with continuing education programs now offered in various local areas

- The annual meetings of health care provider organizations

D. Recommendations

See Chapter IV, Provider Roles Recommendation

Commentary on Community Awareness

A. Goal

- Achieve behavioral changes in black consumer populations such that they will make effective uses of high blood pressure detection, diagnosis and treatment systems

B. Objectives

- Decrease to its practical minimum the number of blacks with high blood pressure who are not aware of their condition

- Decrease to its practical minimum the number of black hypertensives who are aware of their condition, but who are not receiving treatment

C. Some Possible Mechanisms

- Black oriented media campaigns and other public information efforts to promote initial detection

- Utilization of national and local opinion leaders to assist in awareness campaigns

- Cooperative efforts with local facilitator organizations in encouraging follow-through by detected hypertensives

- Cooperative efforts of individual providers and groups of providers in promoting consumer awareness and follow-through

D. Recommendation

See Chapter IV, Community Education and Coordination Recommendations and Health Education Recommendation

Commentary on Establishment and Maintenance of Community-Wide Collaborative Systems

A. Goal

- Each community with a significant black population should have in place a system of coordinating consumer education and health services delivery systems components. The result should be that total HBP education and control system coverage is available to all hypertensives, their families and their significant others.

B. Objectives

- Establish and maintain operational linkages with nonblack providers and institutions serving predominately black populations

- Establish and maintain operational linkages with local and national facilitator organizations that can influence black consumers regarding HBP detection and the importance of adherence to treatment regimens

- Establish and maintain appropriate systems of referral and feedback that will enable all providers to fulfill their roles in HBP control

C. Some Possible Mechanisms

- Participation by black providers and black facilitator organizations in existing community coordination efforts. Such participation should promote consistency with the consensus positions developed by the National Black Health Providers Task Force

- Development and operation of local black-oriented coordination mechanisms in areas where black hypertensives do not have access to established systems of coordination and care

D. Recommendations

- See Chapter IV, Community Education Recommendation

CHAPTER IV. RECOMMENDATIONS ON RESOLVING BARRIERS TO EFFECTIVE HIGH BLOOD PRESSURE EDUCATION AND CONTROL

The development of consensus on the proposed roles of black health care providers in high blood pressure control represented an important aspect of NBHPTF's work. An equally important aspect was the identification of potential barriers to effective high blood pressure education and control among black Americans. The task force was charged with developing suggested methods for neutralizing or overcoming these barriers.

In developing these recommendations, NBHPTF sought and received input from a number of governmental officials and leaders from civic, religious and fraternal organizations, the insurance industry, voluntary associations, and foundations.

The provider role recommendations (section A) represent the result of the consensus building process described in chapter I. The sections on the recommendations for reducing barriers (sections B-J) represent the reports of working groups within the task force. These reports were accepted by the full task force for presentation in this final report.

The following recommendations are presented as an agenda for action on high blood pressure education and control for black Americans.

A. Providers' Roles

The task force recommends that the proposed provider roles developed by the task force be circulated widely for consideration and adoption by practitioners and institutions which serve black populations.

The detailed presentation of recommended provider roles is presented in chapter III. The following are brief summary overviews of the recommended roles.

1. Summary of Physicians' Roles

a. Detection

Primary care physicians (e.g., internists, family practitioners) and cardiologists are typically the ones who treat persons with high blood pressure. However, many patients may have their entry into the health care system by visits to physicians in other specialties --gynecology, urology, dermatology, ophthalmology surgery, otolaryngology, etc.

Thus, physicians in all specialties should measure blood pressure routinely on all patients. Physicians who elect not to

277

diagnose or treat high blood pressure conditions in their practices should refer patients with elevated readings to physicians who diagnose and treat high blood pressure. Where referrals are made, the referring physician or his/her staff should follow up with the patient to encourage the patient to keep the suggested appointment.

b. Control and Maintenance

In achieving control of the patients' blood pressure, the physician's role can be described as:

- Performing the physical examination and history-taking procedures and ordering appropriate laboratory tests
- Evaluating the patient and the data to make the diagnosis
- Establishing with the patient a goal blood pressure
- Prescribing the appropriate drug therapy
- Advising the patient of recommended lifestyle changes and adjunctive measures
- Educating the patient (or referring the patient to an appropriate source for education) regarding the necessity of lifetime compliance with the recommended regimen
- Assessing the patient's progress toward controlling his/her blood pressure and reinforcing the patient's and the family's commitment to such progress
- Modifying treatment as clinically indicated to attain goal blood pressure

The Joint National Committee findings are recommended as guidelines for physicians in fulfilling these roles.*

2. Summary of Nurses' Roles

a. Detection

It is recommended that nurses take or supervise the taking of blood pressure measurements routinely in those settings in which they most often perform (e.g., hospital emergency rooms, hospital outpatient departments, comprehensive health centers, visiting nurse services). Persons with elevated blood pressure should be seen by a physician. The nurse may be required to assist in communicating the steps the patient should take to obtain a confirming physician's reading.

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* Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure, op. cit.

b. Control and Maintenance

It is recommended that nurses may perform or assist in taking patient histories, may assist or supervise others who assist the physician in the performance of other therapeutic services.

Nurses may also provide patient education services or supervise others in providing patient education and counseling with regard to compliance with prescribed therapy, needed lifestyle changes and adjunctive measures.

3. Summary of Dentists' Roles

a. Detection

Due to the symptomatic nature of many dental problems, many persons visit the dental office who might not otherwise utilize the health care system on a routine basis.

Thus the dental office represents a significant potential location for detection of otherwise undetected hypertensives. The dentist's auxiliary staff is viewed by the task force as being, potentially, an especially useful resource for this purpose, given appropriate training.

It is recommended that blood pressure measurements be taken in the dental office on a routine basis for all patients during their first visits.

In the dental office, blood pressure should be measured in the arms only. Persons requiring measurements in other extremities should be referred to a physician.

All persons with elevated readings according to Joint National Committee guidelines should be referred to a physician for confirmation. Proper notations should be made in the dental records and, if elevations are found, the dentist or his/her staff should assist the patient in contacting the provider who will perform the confirming measurements.

During dental history-taking, patients should be asked if they have ever been told by a physician that they have high blood pressure and if they are taking medication for high blood pressure.

b. Control and Maintenance

Previously identified hypertensives should have their blood pressure measured routinely on each dental visit. Patients with elevated blood pressure should be reminded to continue in the physician's care and to report any medication side effects to the physician.

4. Summary of Pharmacists' Roles

a. Detection

The task force recommended that pharmacists take blood pressure only in those circumstances where a quiet environment can be provided and when appropriate follow-through mechanisms recommended by NBHPTF are in place and being utilized.

Where blood pressure measurements are taken by Pharmacists, the patient's physician (if requested by the patient) should be informed in confidence of the reading.

The use of automated blood pressure measurement devices in pharmacies and other locations is not encouraged by NBHPTF pending the resolution of certain guidelines development activities in which government, business, consumer, and health industry representatives are engaged.

b. Control and Maintenance

Pharmacist functions in control of high blood pressure and the maintenance of such control require close coordination and cooperation with the physician who has the management responsibility for the patient.

The pharmacist should: a) fill the prescription from the patient's physician; b) instruct the patient on how to take the medication; c) establish and maintain medication records; d) remind patients of needs for refills of prescriptions.

The pharmacist should provide consultation to the physician, when appropriate, regarding possible drug interaction problems and related potential adverse reactions.

The pharmacist should be attentive to the patient's reporting of side effects and other compliance problems. Pharmacists should encourage patients to visit their physicians for appropriate medical consultation.

5. Summary of Optometrists' Roles

a. Detection

Many persons may visit an optometrist's office for vision correction and related services who might not otherwise utilize the health care system on a routine basis.

Thus, the optometrist's office is viewed by the task force as a potentially useful location for detection of elevated blood pressure.

It is recommended that, as a matter of routine, blood pressure measurements be taken in the optometrist office at least on initial visits. Measurements should be taken in the arms only. Persons requiring measurements in other extremities should be referred to a physician for measurement.

Persons with elevations, as defined by the Joint National Committee, should be referred to a physician for confirmation. Such referrals should be noted in the optometrist's record.

b. Control and Maintenance

It is recommended that on subsequent visits optometrists encourage hypertensive patients to remain under the physician's care and to remain in compliance with the prescribed therapy.

Optometrists should measure the blood pressure of hypertensive patients and advise them to return to the physician's office in cases of sustained elevations.

6. Summary of Podiatrists' Roles

a. Detection

Some persons with problems treated by podiatric medicine may tend to seek the podiatrist's care even though they are not using other components of the health care system.

The podiatrist's office is viewed by the task force as a most useful site for the detection of elevated blood pressure. Measurements should be taken for detection of elevated blood pressure in the arm only. Persons requiring measurements in other extremities to detect elevated blood pressure should be referred to a physician.

It is recommended that podiatrists or their assistants, as a matter of routine, take blood pressure measurements on their patients. Persons with elevations, according to Joint National Committee guidelines, should be referred to a physician for confirmation.

b. Control and Maintenance

Because many persons who seek podiatry care may tend to have other chronic conditions, the podiatrist's office is viewed as being an especially useful site for the routine measurement of blood pressure for previously identified hypertensives. It is recommended that such routine measurements take place and that hypertensive patients be encouraged to remain under the physician's care and in compliance with prescribed therapy.

B. Community Education and Coordination

1. Background

At its inception, the National Black Health Providers task force on High Blood Pressure Education and Control acknowledged the importance of community-focused groups and individuals to the success of its efforts. Fundamental to the consensus development process regarding the detection, treatment and control of high blood pressure in the national black community was the realization that health care providers alone would not achieve this objective. The need for effective liaisons between health care providers and the target population became apparent and, thusly, collaborative relationships with organizations and individuals were sought and developed.

These organizations and individuals, appropriately referred to as facilitators, represent knowledgeable, reliable structures already in place.

In many cases these facilitators can provide social support services that have increased the effectiveness of a number of High Blood Pressure Education and Control Projects. The High Blood Pressure Detection and Follow-up Program is illustrative in this regard.

Collaborative relationships offer a dual opportunity to bring a major health problem in the black community under control and to strengthen this existing structure as well.

In addition to the relationships sought with facilitators, the community education and coordination efforts of the National Black Health Providers Task Force have included accessing the target population through national and local media outlets. The media is, without question, a powerful and influential force in black communities.

The first phase of activity in community education and coordination was guided by a national approach of increasing the involvement of the national offices of facilitator organizations, media outlets with national viewing audiences, and leaders with national visibility.

These recommendations, however, mark the beginning of phase II in the community education and coordination efforts. This phase will employ a local approach to the implementation of task force recommendations, along with the complement of the national emphasis characteristic of phase I.

The basic concept inherent to the following recommendations is a collaborative involvement of the local affiliates of both facilitators and the media in selected communities to access the public in demonstration projects. The desired effect is the implementation of task force recommendations leading to the reduction in uncontrolled high blood pressure among blacks to its absolute minimum.

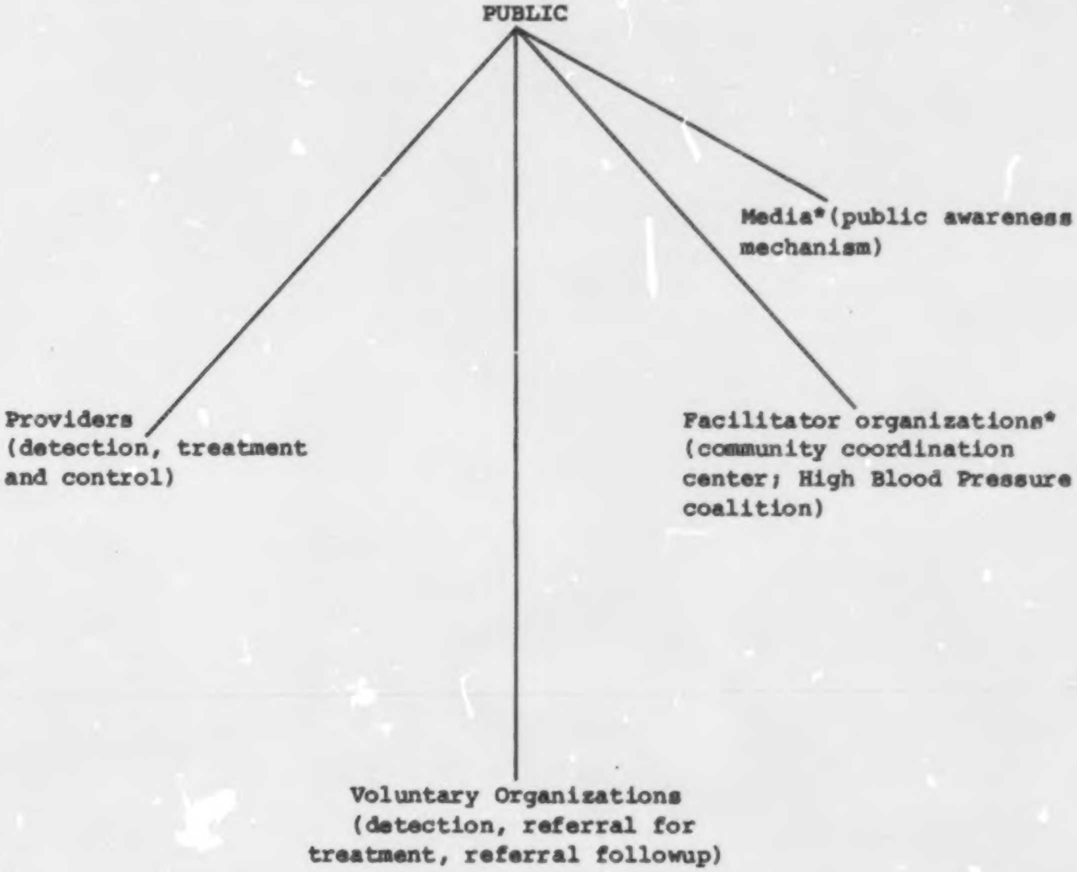
2. Recommendations

Recommendation 1: The task force recommends that the National Heart, Lung, and Blood Institute of the National Institutes of Health provide all necessary support to achieve the selection of four sites to serve as demonstration projects to implement the recommendations of the task force in the detection, treatment and control of high blood pressure in the black community.

Justification: These sites would represent opportunities for implementation of a large number of task force recommendations in an integrated, consistent manner. Such demonstration site implementation could provide an experiential base from which to launch nationwide efforts toward increased high blood pressure control for black Americans.

SUGGESTED ROLES AT DEMONSTRATION PROJECTS

SELECTED SITE


PUBLIC
Media*(public awareness mechanism)
Providers (detection, treatment and control)
Facilitator organizations* (community coordination center; High Blood Pressure coalition)
Voluntary Organizations (detection, referral for treatment, referral followup)

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* These entities are direct access groups to the general black public and its hypertensives.

Recommendation 2: The task force recommends that a collaborative effort be sought with the local outlets of selected facilitator organizations to serve as community coordination centers in high blood pressure education and control demonstration projects.

Justification: The facilitator organizations are privy of existing community barriers to change, are knowledgeable concerning locally viable solutions to other health systems and community organization problems, and are adept at mobilizing their communities to respond to calls of action. As coordination centers, they could promote screenings, referral and followup activities.

Recommendation 3: The task force recommends that a joint planning council be established on both national and local levels to oversee the implementation of its recommendations.

Justification: The guiding philosophy in the implementation of the task force recommendations is one of collaborative involvement of health providers and those organizations and individuals which represent a credible structure in the target communities. The creation of a joint planning council to serve as an umbrella-like structure will provide an effective communications mechanism to encourage appropriate actions in the private and public sectors.

The National Planning Council would include representatives from provider associations, religious, civic rights, fraternal and labor organizations, voluntary associations and the business community.

Local planning councils in black communities would have similar memberships and would include community leaders from each target community.

Recommendation 4: The task force recommends that those facilitator organizations who agree to serve as coordination centers in the implementation of the recommendations be allocated adequate monies to develop and perform the programmatic initiatives necessary to the successful completion of this effort.

Justification: The breadth of recommendations and, thus, the implementation of same will require a well-developed programmatic initiative in each facilitator organization serving as a coordination center. The community outreach expertise of the local outlets of facilitator organizations make them prime candidates to serve as effective community coordination centers in those sites selected as demonstration projects. Sufficient levels of funding for this effort will ensure a complementary relationship of both Federal and local expertise in the high blood pressure detection and control process.

Recommendation 5: The task force recommends a thorough evaluation of the effect of public awareness and education approaches as they relate specifically to the black population. Based upon the outcome of this study, the task force recommends that the NHLBI implement a targeted awareness and education campaign in selected localities.

Justification: Nationally, a significant amount of work has been done in the general area of high blood pressure education and control. Impressive statistics are available regarding the distribution of tens of thousands of copies of the Joint National Committee report, the placement of hundreds of public service announcements in the electronic media, etc. The impact of these efforts on black providers and consumers is difficult to assess. Most data sources continue to suggest that uncontrolled high blood pressure among blacks is greater than among non-black persons. The task force believes that a targeted education and control process will be required to reduce uncontrolled blood pressure among blacks.

Several clinicians expressed their view to members of the task force that the medical model "turns people into patients." It was suggested that the asymptomatic nature of high blood pressure might be a limiting factor in conceptualization of the disease by some persons. Messages that convey the disabling consequences of not treating the disease were advocated before the task force by some clinicians.

Recommendation 6: The task force recommends the establishment of undergraduate and/or graduate programs for the training of communications specialists with a concentration in health education.

Justification: The need for liaison between health professional providers and the general population is a pressing one. The task force has taken the position that a communication specialist of this kind is required as an integral part of any health care team which has as its goal the reduction of uncontrolled high blood pressure in communities across the country. The urgency surrounding this matter is further enforced by the lack of a reserve pool of communications specialists with a concentration in health education in black communities.

C. Biomedical and Epidemiological Research Issues

1. General Considerations

An exhaustive discussion of these issues is beyond the scope of this report. However, certain issues are of paramount importance and some of these issues are raised here.

a. Background

The problem of uncontrolled high blood pressure in the American population is a monumental one. Current national estimates using 140/90 blood pressure suggest that over 55 million people in the United States are subject to this malady. Using the WHO criteria for high blood pressure (160/95) there are approximately 35 million American hypertensives of which 5 million are black.

Epidemiological evidence suggest that while only 5 million of the 35 million people in this country with definite high blood pressure are black, the prevalence, that is to say, the number of people with the disease divided by the number in the population at risk is approximately 66 percent greater in the black community than in the white community. Further, fatal strokes are anywhere from three to five times higher in the black community than in the white community.

Since it is recognized that the phenotypic man is the combination of the genotype and interaction with the environmental, it is not unreasonable to think that the pathophysiology that may occur in man can be related to both the genetic predisposition of the man coupled with environmental factors.

Other sections in the report address many of the external environmental factors such as stress, education, and socioeconomic conditions. It is the intent of this section to identify areas that fall within the biomedical research purview generally that may have an impact on understanding of the basic mechanisms of high blood pressure and providing insight into new, less complicated, and/or cheaper methods of high blood pressure control that are both culturally and technologically acceptable to the population at risk.

b. Biomedical Issues

It would seem that the most appropriate place to begin this discussion centers around the newborn child. It has been observed by investigators that there is a significant difference in the heart rate of a newborn black child as opposed to the heart rate of infants in the general population. The significance of this finding is not clear, however, many believe that early in the pathogenesis of high blood pressure, cardiac output will rise prior to the finding of increased peripheral vascular resistance. Heavy sodium loading during early childhood years, in part based on the types of products available to poor or underpriviledged people, and/or low feeding of foods rich in high potassium content, which tend to be of the fresh fruit variety and may not be available generally to poor people, may influence the development of high blood pressure by young adulthood.

2. Recommendations

Recommendation 1: The task force recommends that controlled studies be done that further elucidate the relationship in an infant between increased cardiac output and high blood pressure.

These differences should be compared between blacks and whites. It would seem that if animal models can be developed that will shed light on this subject this should occur as soon as possible.

Recommendation 2: The task force recommends that controlled experiments be conducted to elucidate the relationship between potassium loading and the retardation of development of systemic high blood pressure as a preventive measure during infancy and the developing years.

If an animal model is available it should be used; if not, one should be developed to elucidate this concern.

Recommendation 3: The task force recommends that studies addressing the problem of sodium loading in infancy and subsequent development of systemic high blood pressure be continued.

As infants move into childhood, the National Health and Nutrition Examination Survey suggested that there is essentially no difference in blood pressure distribution between black children and white children. However, according to the Bogalusa Study, small but measureable differences do occur during this time.

Recommendation 4: The task force recommends that a controlled experiment be done to elucidate the apparent difference in finding of the Bogalusa study versus national data collected on a random basis in the Health and Nutrition Examination Survey.

The task force would be interested in knowing whether the fact that the machines used in the Bogalusa Study (semiautomated) produced artifacts that affected the results.

According to the HANES study, by age 20 there are measureable differences in blacks and whites in both systolic and diastolic distribution of blood pressure.

Recommendation 5: The task force recommends that the appropriate studies be conducted to determine the reasons for the statistically significant blood pressure distribution differences between blacks and whites after the age of adolescence.

It is now appropriate to consider the problems of high blood pressure in adulthood. It would seem that on the basis of categories developed by investigators looking into the renin-angiotension aldosterone axis coupled with salt and water balance, and high blood pressure among blacks tends to be of the variety that causes fairly high salt retention. Some have advanced the idea that blacks tend to retain a higher amount of sodium per unit sodium load than whites. This has been expressed in the negative, i.e., blacks tend to have a defect in sodium excretion given a defined salt load. The task force feels that this designation is a negative one and would utilize positive phraseology that would suggest that blacks tend to retain a greater amount of sodium per unit load as opposed to excreting less against a known quantity. Some investigators have suggested that this may have been a survival mechanism in parts of arid Africa.

Recommendation 6: The task force recommends that further study be devoted to comparative differences between the physiology of the salt-retaining kidney and the salt-excreting kidney.

Recommendation 7: The task force recommends that further studies be done to elucidate the differences between the salt-retaining and the salt-excreting kidney caused by factors such as the control of blood volume, extracellular volume, rates of excretion, and renal hormones including renin, renal medullar lipids, kallikrein, and hormones unrecognized to date.

It is fairly clear that salt and water are involved in the pathogenesis of high blood pressure. These areas may be discussed in terms of both salt appetite and intake, the amount of salt and water within the body structure and finally the renal and fecal excretion of both salt and water.

The literature in this area is not clear but the task force does believe that there is a relationship if not an etiological one between liberal sodium intake and the subsequent development of high blood pressure. There is no question that man's appetite for sodium exceeds the physiological need. It is felt by many that the excess sodium provided over long periods of time results in arterial elevation and an intervention, i.e., reduction of sodium, could possibly lower the incidence of high blood pressure in the general population. There are epidemiological studies that do support this view but they are not in themselves totally convincing. It has been difficult to separate the effect of sodium from underlying pathology in the study group and of course from genetic and environmental influences. Further, it has been difficult to access quantitatively the amount of salt in the form of sodium ingested by participants in many of these studies. The studies that we have reviewed do indicate that a sodium intake of less than 10 milliequivalents per day would in fact lower the incidence of hypertension while excessive sodium will most likely increase the incidence of high blood pressure. It is the intermediary changes at this point in time that are not clearly associated linearly with the reduction of blood pressure.

Recommendation 8: The task force recommends that methodology be developed to separate the impact of sodium manipulation from other factors such as body weight and potassium intake.

Recommendation 9: The task force recommends that a methodology be developed to accurately measure sodium intake, metabolism, and excretion. This should be done in a mode that will promote experimental accuracy with methodologies pointing toward the clinical usefulness of these measurement techniques.

Recommendation 10: The task force recommends that studies be done to clarify the relationship between sodium and potassium and vascular resistance.

We have now discussed the biomedical needs as they relate to intake, metabolism and excretion of salts. However, to understand better the reasons for high salt intake we need to turn our attention to so called salt appetite and salt intake. It is known that man has an unusual appetite for salt; it is not clear on what psychophysiological basis this attraction for sodium is based. It is known for example that angiotension infusion in the brain does indeed affect salt appetite.

Recommendation 11: The task force recommends that studies be designed and undertaken to detect the basic underlying mechanism for salt intake, taking into account cultural differences, as these may be important in the types of products that are developed to address the salt appetite problem.

There are other elements involved in the blood pressure elevation process. Potassium certainly is a major mineral that has not received the type of attention that it seems to deserve in the literature.

There are several studies available that report a large potassium intake would in fact lower blood pressure in hypertensive subjects. It is further noted that many tribes in the world that are free from high blood pressure have diets that have a higher potassium intake than the average American diet.

Potassium presents a particular problem in that a larger proportion of this mineral is excreted in the stool than of sodium. The conventional methodology for collection, i.e., urine analysis is not satisfactory for the study of potassium as it is perhaps for sodium intake.

It is known that fresh fruits and salads are excellent sources of potassium. However, it is also known that these products are relatively more expensive than foodstuffs that are generally consumed in poor communities. If one accepts the hypothesis that potassium protects against blood pressure raising elevation it is possible that some of the differences between blacks and whites can be demonstrated through the relative dietary intake of these two minerals.

Recommendation 12: The task force recommends that controlled studies be done to determine the exact nature and extent of the blood pressure lowering effect of potassium in human beings.

Recommendation 13: The task force recommends that studies be done on the prevention of the development of high blood pressure.

Recommendation 14: The task force recommends that data on the general intake of potassium with respect to the age/race/sex and socioeconomic status be gathered and analyzed.

Recommendation 15: The task force recommends that the appropriate Federal agencies begin to develop appropriate relationships with governments, universities and health systems within countries where there may be a prevalence of uncontrolled blood pressure in areas from which blacks migrated.

Cardiovascular disease is the most common cause of death in the western industrialized world. In developing nations, however, infectious diseases are the paramount cause of disability and death. Many of these diseases lend themselves to a prevention strategy (i.e., immunization, sanitation, etc.) which, when followed, will cause major changes in the distribution of disease.

As this occurs, death and disability due to uncontrolled high blood pressure may become a major health problem in these areas.

In anticipation of these problems, the appropriate Federal agencies should begin to develop appropriate relationships with governments, universities and health systems within countries where there may be high prevalence of uncontrolled blood pressure in areas from which blacks migrated.

One objective of these relationships would be to provide technical assistance in the development of appropriate methodology to assess prevalence of high blood pressure and the incidence of illnesses related to uncontrolled blood pressure.

The U.S. Government should collaborate with foreign governments and other interested parties in the development of intervention strategies in areas of uncontrolled blood pressure and other related diseases that may lend themselves to an education/demonstration strategy.

Clearly, understanding etiology of high blood pressure is part of the prevention strategy. Acculturation within the Western society has occurred to a significant degree for many blacks living in the United States.

Many parts of Africa are being acculturated in the Western tradition and soon the locations where opportunities for study of possible etiological factors in high blood pressure may be diminished.

The task force recommends that collaboration between investigators in the United States and their counterparts in these countries should be encouraged in the areas of behavioral, biomedical and epidemiological aspects of uncontrolled blood pressure. The emphasis should be on discovering relationships between the unduly widespread prevalence of high blood pressures of black Americans vis-a-vis blacks in areas from which black Americans immigrated.

There should be a balanced representation of black providers and investigators in the aforementioned studies.

D. Delivery Systems Issues - Research and Policy Recommendations

1. Background

According to the Background Paper: Health Differentials between White and Non-White Americans, Congressional Budget Office (CBO), September 1977, "Non-Whites are less healthy than whites, they get less care, and the care they do get may be less effective." The term "non-white" used in the CBO paper is defined as meaning blacks, American Indians, and Orientals. The 1970 Census indicated that Asian Americans, Native Americans, and other nonwhite Americans totaled 1.26 percent of the U.S. population, or about 2,556,000 persons; blacks, however, were counted as 11.10 percent of the U.S. population, or 22,550,000 persons. Thus, even without considering the admitted undercounting of blacks in 1970, it is clear that the CBO background paper is most pertinent to the black population in its depiction of the serious white/nonwhite health differentials, and of the major problems perceived in the delivery system which constitute barriers to black utilization.

In order to reduce the color-related health differentials and improve governmental and private responsiveness to nonwhite needs, the CBO paper states that at least four major problems would require substantial attention. One of the major problems is the financial barriers to the receipt of health services, a topic discussed elsewhere in this report. The other major problems indicated in the CBO background paper are:

- nonfinancial barriers including insufficient providers providers and services, and discrimination against blacks and other nonwhites;

- the lack of continuity of care when services are provided by some elements within the health delivery system; and

- inadequate attention to certain health conditions which severely affect nonwhites, such as high blood pressure.

The task force believes that the problems identified in the CBO background paper are applicable to high blood pressure detection and control, and that concerted action to eliminate these problems is essential to the achievement of the NBHPTF goal. It is clear also to the task force that every policymaking and administrative function and appropriate facility concerned with improving the Nation's health status --from solo to practitioner to state health planning and development agencies to Federal agencies--must participate wholeheartedly in this action.

Moreover, the task force believes that parallel action must be addressed to the serious problem of patient noncompliance with treatment plans and medication, a problem which exists among several races and ethnic groups. Advances in pharmacology and medical biology over the past 20 years have made high blood pressure control possible in almost all cases if the patient is continuously compliant.

Although more research into noncompliance is required, and more effective patient education methods need to be developed, we believe that compliance may be increased significantly through provider initiated actions such as those described by Finnerty: to wit, 1) improving the administration and organization of the office, clinic or other setting, 2) continuity of patient care by the same provider or provider team, 3) reduced patient waiting time, 4) pleasant waiting areas, and 5) time-specific appointments. These have been identified as ideal minimal characteristics of any practice setting where compliance is vigorously promoted and monitored.

The model high blood pressure control process, which was developed by the National High Blood Pressure Education Program and expanded by NBHPTF, is based upon the fact that most health care related to high blood pressure control is delivered to ambulatory patients by primary care physicians, physician assistants, and nurse practitioners trained in primary care, and by certain other providers on a limited, nondiagnostic basis.

The functions of providers in the delivery system have been suggested in chapter III.

2. Recommendations

Recommendation 1: That appropriate research be conducted to detemine approaches for eliminating the obstacles presented when race-related and class-related communication problems occur between blacks and the providers who treat them.

Justification: It should be stressed that many blacks have no difficulty whatsoever in effective communication with the delivery system or health providers. However, it is felt that some providers have difficulty in communicating with any black or minority group individual because of their racial- and/or class-related orientations. In other instances, such as interactions between some foreign medical graduates and blacks, language and cultural differences may prevent or impede effective communication. This critical problem can be regarded as a significant cause of patient noncompliance in some settings.

In the case of blacks and other racial, cultural or ethnic minorities from socially, economically and educationally disadvantaged environments, their isolation may manifest itself in health beliefs, perceptions of the health delivery system, and in language characteristics which the provider may not understand. Providers may not realize the significance of such factors in the detection, treatment, or control of high blood pressure. Therefore, means must be found to eliminate the impact of race and class upon the quality of care received by all minority group members, and for providers in all branches of the delivery system to seek to bridge the gap which may be induced by language and other cultural differences.

Recommendation 2: That research be conducted to determine how to increse provider consensus regarding professional roles and interactions in high blood pressure control.

Justification: The National High Blood Pressure Education Program has identified three objectives directed to M.D.'s and D.O.'s in general or family practice, internal medicine and cardiology which address provider consensus. The objectives are:

> "(1) to increase and/or maintain physician adherence to JNC medical guidelines in the clinical management of patients; (2) to increase the number of physicians who review (audit) their clinical management practices against validated criteria and guidelines; and (3) to increase the number of physicians who develop skills in and routinely use patient education for enhancement of therapy maintenance."

In addition, the task force has utilized a model high blood pressure control process which also recognizes the indispensable need for interaction among a number of nonphysician provider disciplines in a variety of delivery settings. However, the urgency and dimension of the high blood pressure problem among blacks is such that lives may be being lost if the providers in the delivery system are not attempting to develop or follow practice patterns such as those recommended by the NHBPEP and/or the NBHPTF. The members of the NBHPTF, representing a wide band of disciplines concerned with the control of high blood pressure, have developed a control process which they believe will provide a basis for effective utilization by all providers who wish to improve the quality of patient care and management. These have been national efforts. The task force also recognizes the urgent need to research other means of attracting and committing providers to consensus and voluntary interaction on the local level.

Recommendation 3: That research be conducted to determine how to overcome the lack of consistency and interest among some providers in high blood pressure management.

Justification: Many physicians believe that they often fail to control their patients' high blood pressure. According to a recent FDA survey, the JNC guidelines are not followed consistently, although more than half of the physicians practiced stepped care therapy. Research on methods which would improve techniques for obtaining physician adherence is suggested.

Recommendation 4: That the NIH and the NHLBI expand and accelerate their efforts to disseminate research findings to black utilized practice settings, professional organizations, and publications.

Justification: The task force applauds the efforts of the NIH and NHLBI to date. Indeed, the establishment of the NBHPTF itself is an indication of increased concern. Nevertheless, the dimensions of the high blood pressure problem among blacks are such that rapid, focused knowledge transfer is imperative. Since NIH has no staff of its own in the 10 Regional Offices of the Public Health Service, DHEW, it may be difficult to achieve this recommendation. However, it may be necessary to rethink organizational structures and communication channels in order to address this acute need. The use of publications which are read widely among black providers is to be encouraged as is continuing liaison with the organizations represented on the NBHPTF.

Recommendation 5: That pilot data bank projects are required to test the feasibility of storing, retrieving and communicating vital data on hypertensives for the use of providers in areas where providers are isolated geographically, and where high blood pressure control activities are fragmented.

Justification: The task force recognizes that there may be ramifications for patient confidentiality which would have to be overcome. Nonetheless, the need for continuity of care is acute in most black residential areas and within some facilities where staff turnover may be high. According to the Health of the Disadvantage Chartbook, Health Resources Administration, September 1977, blacks and other racial/ethnic minorities receive substantially higher percentages of their care in clinics and other facilities where the possibility is higher that the patient may not receive continuous care from the same provider, and to which the black or other racial/ethnic minority group member has traveled longer over a greater distance. Consistent availability of the patient's data might be a helpful adjunct to efforts aimed at continuity of care.

Recommendation 6: That consensus building be initiated among providers for the purpose of agreement upon provider continuing education programs, the cognitive, attitudinal and behavioral objectives of such programs, and the numbers and categories of professionals who could be included in such programs.

Justification: Providers should take the initiative in self-evaluation to determine professional strengths and weaknesses which impact upon their involvement in the control of high blood pressure among blacks and should take the appropriate actions to reinforce strengths and correct deficiencies.

Recommendation 7: That nontraditional settings for the detection of high blood pressure among hard-to-reach blacks be utilized.

Justification: With the increasing involvement of black institutions such as churches, fraternal organizations and communications media, it becomes apparent that the opportunity exists to identify and serve many blacks who would tend not to come forth voluntarily to a traditional setting (i.e., community health center, hospital OPD, private doctor's office) for high blood pressure detection. In fact, the task force is aware of successful detection efforts which have been implemented as a result of interest by churches and other groups within black communities. Detection services in places of business, and factories and recreational settings are increasingly common. We believe that every black community has the potential for planning, with the help and guidance of local providers, the best methods for contacting the hard-to-reach in the individual community and for assuring that the appropriate backup linkages are in place for referrals and counseling.

Recommendation 8: That every patient be guaranteed continuity of care from diagnosis through therapy and maintenance and that medical record keeping be maintained in a manner supportive of care continuity.

Justification: Continuity of care cannot be guaranteed without assurance that sufficient providers and facilities are available to blacks, that financial and other barriers are eliminated which may limit patient utilization, and that providers are willing to give high blood pressure detection, treatment and management the priority commensurate with its seriousness. Other steps which would promote continuity and compliance are: (1) assuring that all providers in the practice setting share the same concern for high blood pressure treatment and control; (2) picking up negative feedback from patients which could be used to point up areas for possible improvement in patient care; (3) keeping individual patient flow charts or similar records on diagnosed hypertensives, which is a means of saving both provider and patient time; (4) giving definite, time specific appointments to patients in writing, particularly until the blood pressure is under control; (5) maintaining a followup appointment file on patients so that those who miss scheduled appointments may be contacted and rescheduled; (6) working closely with other providers and facilities concerned with high blood pressure in order to assure the highest possible backup, linkage and cooperation; and (7) making the patient aware of the provider's personal concern as well as transmitting to the patient that he/she is a partner and participant in the control of his/her own high blood pressure.

Recommendation 9: That Health Systems Agencies give high blood pressure detection treatment and control the highest possible priority in their health service plans and annual implementation plans.

Justification: Health Systems Agencies were established under Public Law 93-641 in 205 geographic areas of the nation to foster increased effectiveness of the health delivery system through the participation of consumers, providers and institutions. Due to limitations on the resources available, local attitudes and support, and sometimes limited participation by blacks proportionate to the severity of black health deficits, many Health Systems Agencies have not addressed the problem of high blood pressure to the degree necessary for concerted, cost-effective and ongoing approaches within the HSA delivery system areas. Black health providers and informed consumers may need to determine whether they have made maximum use of the Health System Agencies as a mechanism for advocating high blood pressure detection, treatment and control. Despite the limitations of any individual Health System Agency, an HSA still provides a forum for focusing attention on this and other health problems which impact severely upon blacks.

Recommendation 10: That additional research and field testing be conducted in settings utilized by blacks to determine if dosettes can be produced and marketed at prices within reach of poor blacks.

Justification: The success of the birth control pill demonstrates how dose packaging may encourage compliance. Antibiotic therapy for streptococcal pharyngitis has been effective in terms of compliance when the packaging of a day's or week's pills in convenient containers was utilized.

Although dose packaging costs may remain higher than bulk packaging costs, the task force believes that the possible increased compliance resulting from patient use of dose packaged medications merits consideration and analysis.

E. Nutritional Issues

1. Background

Nutrition is an overlooked topic in the discussion of many health care issues. It is the task force's viewpoint that a comprehensive health promotion approach to high blood pressure control should include nutritional factors that contribute to general good health.

With regard to nutrition and high blood pressure, there are a number of research and translation issues which the task force has chosen to address.

2. Recommendations

Recommendation 1: The task force concurs in the statement on the role of dietary management approved by the NHBPEP Coordinating Committee published in March 1979.

Justification: The statement coincides with the views of the task force members. The special recommendations contained in the statement, which were prepared for physicians and other providers are as follows:

- Weight reduction should be routinely considered in the treatment of overweight borderline hypertensives, both for its potential in lowering blood pressure and for its general health benefits.

- Practitioners should encourage weight reduction for the obese hypertensive patient and, if blood pressure is reduced to and maintained at normal levels, it should be used as definitive therapy.

- For overweight patients who experience significant side effects from drugs, weight reduction should be considered as adjunctive therapy to help reduce drug dosages.

- Persons with a family history of hypertension should avoid excessive weight gain and reduce if overweight.

- Prevention or control of obesity in the young should be regarded as having positive health benefits and as a positive preventive step for hypertension.

- Practitioners should recommend a gradual weight loss over time. Drastic weight loss and fad dieting should be discouraged. Practitioners recommending weight reduction should seek to identify a regimen that incorporates realistic goals for each overweight hypertensive. Practitioners should ensure that adequate dietary information is provided.

- Research into the mechanisms relating body weight and hypertension should be pursued.

- Efforts should be continued and expanded to improve patient education in nutrition, to improve dietary counseling for weight reduction and to improve motivational techniques for adherence to diet therapy.

- A CAVEAT: The goal of weight reduction in hypertension therapy is to lower blood pressure to normal or near normal levels. If reduction in calorie intake does not achieve this goal or if the patient does not lose weight, adequate drug therapy should be used.

Recommendation for Sodium Intake

- Moderate sodium restriction should be routinely considered as a possible element in the treatment of all hypertensives.

- Practitioners should encourage sodium restriction and, if blood pressure is reduced to and maintained at normal levels, it should be used as definitive therapy.

- For patients who experience significant side effects from drugs, sodium restriction should be considered as adjunctive therapy to help reduce drug dosages or increase drug efficacy.

- Persons with a family history of hypertension should be encouraged to restrict sodium intake.

- Practitioners recommending sodium restriction should indicate specific diets appropriate to each patient's condition and lifestyle and should ensure that the diet is explained satisfactorily.

- Labeling of sodium content in foods should be encouraged and the development of labeling regulations should be supported.

- Research on the role of sodium in the etiology and treatment of hypertension should be pursued.

- Efforts should be continued and expanded to improve patient education in dietary sodium intake and to improve motivational techniques for long-term adherence to diet therapy.

- A CAVEAT: The goal of sodium restriction in hypertension therapy is to lower blood pressure to normal or near normal levels. If sodium restriction does not achieve this goal, adequate drug therapy should be used.

Recommendation 2: That further research be conducted to determine the value of diet modification in the treatment of high blood pressure.

Justification: There is insufficient knowledge currently available to define all scientific questions regarding diet modification as an adjunct to drug therapy for severe hypertensives, or as an alternative treatment approach for borderline and moderate hypertensives (diastolic 90-104). One of the important questions at this time in the case of moderate hypertensives is whether diet modification would eliminate or reduce long-term drug therapy with its attendant unknown risk.

Recommendation 3: That further research be conducted to determine if a modest level of sodium restriction (i.e., a level which might be generally acceptable) could produce a significant reduction in blood pressure among blacks.

Justification: In the event that a generally acceptable level of sodium restriction produced significant blood pressure reductions, public health, medical and scientific officials would be enabled to develop precise strategies for effectuating the restriction. Such strategies could include voluntary, regulatory or legislative action to govern sodium levels in foods and drugs prepared commercially, the development and use of palatable and economically acceptable sodium substitutes and the development of knowledge which could be applied successfully to modify taste preferences. This issue is especially relevant in view of observations made by clinicians to the task force that some elements of their black clientele consume large quantities of foods high in sodium. These included potted meats, canned sausages, vegetables cooked in fatback, and certain pork delicacies.

Recommendation 4: That further research be conducted to identify successful strategies for achieving long-term dietary change with emphasis upon:

- black cultural differences and practices in terms of food habits, eating patterns, and health and food beliefs,
- socioeconomic and education factors,
- age, sex and geographic factors, and
- current lifestyle trends.

Justification: If dietary modification is proven to be medically efficacious, the modification of habits becomes the primary issue.

Recommendation 5: That research be conducted to determine the value of altering the sodium intake of family members of hypertensives as a primary prevention strategy.

Justification: Current studies suggest that there is a higher correlation of high blood pressure in families where one or more members has been diagnosed as hypertensive. This research would address the prospects of primary prevention among such family members.

Recommendation 6: That a "Cookbook" be compiled by black nutritionists and physicians for the use of black hypertensives and their families which would take into account black food preferences whenever possible.

Justification: Although there are menus and diets available, many of which were prepared by black nutritionists, there is no comprehensive cookbook available for general dissemination.

Recommendation 7: That the medical and continuing education curricula for physicians and other providers place more emphasis upon nutrition, diet and the counseling of patients with respect to the nutritional aspects of high blood pressure prevention, treatment and control, and particularly upon the nutritional history of black patients.

Justification: In practice settings, lack of attention to nutritional factors may be due to insufficient data to the provider regarding the effectiveness of diet change, or due to the lack of time available to the provider for counseling. In the case of high volume practices, a nutritionist or health educator could be employed effectively to ensure that the patient has an individualized diet plan, that the patient compliance is monitored carefully. In some practices, referral could be preferable. In either case, the provider must be knowledgeable about the importance of nutrition. Medical schools, residency programs and continuing education programs should include state-of-the-art information on nutrition and high blood pressure in their curricula.

Recommendation 8: That nutritionists and dieticians who will serve in black communities should have an internship or intensive orientation in a provider facility serving black hypertensives.

Justification: Such a preparatory experience could help to sensitize the nutritionists or dieticians to the unique cultural, environmental and dietary considerations pertinent to blacks in various categories in regard to high blood pressure. The experience would prepare the intern for implementing practical and realistic approaches to food preparation, simple, palatable and economic alternative food choices, food management, and shopping techniques.

Recommendation 9: That the nutritional programs and practices of institutions feeding large concentrations of blacks, such as penal, mental, geriatric, educational and military facilities, be evaluated for their compatibility with high blood pressure control recommendations endorsed by the task force.

Justification: Institutional settings provide an opportunity to conduct antihypertensive nutritional efforts for large populations where diet content may be monitored with some regularity.

F. Health Education

1. Background

The task force viewed the subject of health education in twin contexts of consumer education and patient education. Consumer education was viewed primarily as a mechanism for educating individuals who are not necessarily hypertensive regarding the need to be examined for blood pressure elevations periodically and the desirability of controlling certain cardiovascular disease risk factors. Patient education was viewed in the widely accepted manner as the delivery of individualized information pertinent to the patient's condition which may enable the patient to participate effectively in his or her treatment and control processes.

In the NBHPTF's viewpoint, health education is required for 1) the black general public so that members of that public can be encouraged to practice good health habits and to seek detection services; and 2) for the black patients who have been diagnosed hypertensive so that they will become partners in their treatment and control.

2. Recommendations

Recommendation 1: The task force recommends that health education for blacks must recognize black diversity.

Justification:

Persons or institutions which plan health education efforts that effect black populations should be mindful of the diversity within the black population. It is the viewpoint of the task force that stereotyping an entire racial group according to the perceived characteristics of a given social or economic subset can produce improper planning assumptions.

Recommendation 2: That greater recognition and utilization be made of professionals trained as health educators who are not clinicians.

Justification: In many institutional settings (hospital OPD's, community health center and health maintenance organizations (HMO)), the status of the professionally trained health educator is precarious. Indeed, many such facilities do not employ such personnel. The task force views the health educator, along with the nutritionist, social worker, and pharmacist, as important members of the health care team. This team can be charged with detecting, treating or aiding in the control of high blood pressure.

Recommendation 3: The task force recommends that every provider having interaction with black patients consider himself as a patient educator as well as a specific type of provider.

Justification: There is some evidence indicating that patient motivation and compliance is improved when the patient understands his health status, is informed of the provider's treatment plan and the alternative outcomes, and clearly understands his responsibility in the control of the high blood pressure. In the case of nonphysician providers who may perform many functions, except diagnosis of high blood pressure, there are many opportunities to encourage, educate, counsel, support and refer individuals who are being treated in the blood pressure measurement or control process. The NBHPTF views this as a significant responsibility for the physician as well.

A number of family practice physicians who made their views known to the task force confirmed the importance of the physician communicating through action (e.g., confirming blood pressure readings taken by staff) and words, the seriousness of high blood pressure. Dr. Donald Ware of the National Heart, Lung, and Blood Institute has confirmed that these impressions are supported by the findings of the National Health Interview Survey and the preliminary data from random household samples in several states.

Recommendation 4: That black clinicians, behavioral scientists, health educators and communicators be identified and organized for the purpose of developing strategies calculated to induce black consumers to use high blood pressure detection, treatment, and control resources.

Justification: In chapters I and II of this report it was established that efficacious treatment is available for high blood pressure and that such treatment is effective for blacks. The methods for health systems delivery and usage of such systems represent the current challenge. black professional experience can be helpful in addressing this issue.

Recommendation 5: That each community with a significant black population should develop community resource centers for coordinating consumer health education and health services delivery components.

Recommendation 6: That careers as health educators should be promoted among young blacks in high school and college.

It is the NBHPTF's view that the development of a larger pool of black health educators would provide a helpful resource for high blood pressure education and control.

Recommendation 7: That health education for the health provider and the public be a primary emphasis in the four demonstration sites selected for the implementation of task force recommendations.

G. Behavioral Studies Related to Hypertension

High blood pressure is considered a serious health problem in the United States. (Mallon 1959, Kannel 1967, 1969, 1970, 1972). Evidence indicates that the implications of high blood pressure among the national black population may be profound. According to statistics from the 1977 tables compiled by USPHS, high blood pressure among blacks, nationally is 66 percent greater than the evidence among whites. Likewise, the mortality rates of blacks and other minorities which stem from various hypertensive conditions such as stroke, ischemic heart disease and cerebrovascular disease is significantly higher than the rates for whites (National Health Statistics 1976, 1978). These statistics also indicate that when the incidence of stroke and death due to stroke is compared for blacks and whites, there is evidence of a significantly higher mortality rate and shorter life expectancy for blacks. While some researchers question whether high blood pressure can be regarded as an intrinsically "psychosomatic" disease (Martin 1971), there are a number of research studies which tend to support the premise that hypertension can be regarded as psychosomatic in origin rather than a traditional physical disease (Resser 1970, Shapiro and Schwartz 1972). These studies suggest that environmental pressure and stress which is social or psychological in nature are significant factors which contribute to the hypertensive condition. Benson's study demonstrated that chimps that were exposed to a closed environment of city noises became hypertensive within a 6-month period. A longitudinal study on high blood pressure conducted at Howard University indicated that of the entering freshman with normal blood pressures, 10 percent of these same students were hypertensive at graduation--suggesting that academic pressures can contribute to accumulative high blood pressure.

There has been a recent move to utilize behavioral approaches to the control of high blood pressure, based on the premise that events in the emotional and psychological life of the patient influence the liability of high blood pressure, affect the progress of hypertension and sometimes its primary pathogenesis. According to the report from the Yale Conference on Behavioral Medicine (DHEW Publication No. (NIH) 78-1424), the behavioral medicine research on hypertension includes:

> "The epidemiology of social, ethnic, and racial influences, the role of environmental stressors in the etiology and pathogenesis of high blood pressure in experimental animals and humans, biofeedback and behavior modification procedures in the treatment of hypertension."

Given that black people in this society are exposed to a variety of extensive pressures and stresses related to personal and institutional racism, poor housing, crowded conditions, low income, unemployment, underemployment, poor education, poor health and other dibilitating ecological factors, the task force believes that attention is warranted for research which examines various effects of stress-related hypertension among blacks.

Harburg, et al. (1973), investigated socioecological stress, suppressed hostility and skin color of black and white males. Findings indicated the highest blood pressure levels were found among black high stress males who were classified as such due to low SES, high crime, high density, high residential mobility and the high rate of marital breakup. Still other studies suggest that the roots of hypertension in blacks extend back to quite early in life (Rose, 1961; Kapoor, et al., 1975). A blood pressure study of black children found that 3.5 percent of the children tested had a blood pressure more than two standard deviations above the mean for their age.

Currently there exists a paucity of research which specifically focuses on the psychosocial causes of hypertension in the black population. Several authors suggest that repression of feelings of conflict and fear of retaliation if conflicts are expressed are major factors in the development of psychosomatic states of health. Blacks, the poor and uneducated who are often muzzled from expression verbally or behaviorally, become primary candidates for the development of hypertension. Hence, there is a vital need for extensive research focused on the psychosocial aspects of hypertension among blacks.

Problem Statement

There is a need to stimulate behavioral research to address psychosocial and socioecological dynamics which contribute to the high propensity for hypertension among blacks. Specifically, environmental stress, and social and economic stress for blacks should be examined as a means to enhance prevention, diagnosis, treatment, and control of hypertension. The task force submits the following recommendations for addressing the issues presented in this section.

Recommendations

1. The task force recommends that studies be undertaken that address social stress factors related to high blood pressure such as crime, family tension, poverty, unemployment and underemployment.

2. The task force recommends that studies be undertaken which examine the affect of environmental stresses such as living in substandard housing in high density areas, noise and generally crowded conditions.

3. The task force recommends that studies be undertaken to examine psychological frustrations of blacks as related to poor economic conditions, loss of locus of control, loss of hope and dissatisfaction with the social system.

4. The task force recommends that studies be undertaken to identify occupational factors which contribute to the accumulated buildup of stress, including the impact of job insecurity, limited job opportunities, job dissatisfaction and job discrimination, unemployment and underemployment.

5. The task force recommends that studies be undertaken to examine alcoholism and drug abuse in relation to high blood pressure.

6. The task force recommends that studies be undertaken to trace the family history of hypertensives with emphasis on identification of similarities or differences in psychosocial dynamics which impact the family.

7. The task force recommends that studies be conducted which examine the prevalence of hypertension in mental institutions, the effect of mental health related chemotherapy on blood pressure, given the types of drugs which are most effective for chronic psychotic patients.

8. The task force recommends that studies be conducted comparing and contrasting the epidemiological data on hypertensive blacks in urban and rural areas of the U.S. in the north, south, east and west.

9. The task force recommends that studies be conducted on stress management techniques of hypertension among blacks with attention to the affects of relaxation, yoga, and biofeedback methods.

10. The task force recommends that studies be conducted of coping mechanisms (behaviors) of black hypertensive patients and/or family of the patient.

11. The task force recommends that behavioral research be conducted in community-based research centers and where there are no such centers some be established in high density black areas where black churches, social, and other community organizations can be utilized to assist in monitoring research in the black community.

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308

H. Manpower

1. Introduction

The stated goal and objectives of the Black Health Providers Task on High Blood Pressure Education and Control are directly affected by the present and future supply, distribution, and specialty concentration of black health manpower in our society. While traditionally black educational institutions have addressed the problems of underrepresentation of blacks in numerous careers including health, it was not until the late 1960's that there was some responsiveness on the part of the public and private sector to increase opportunities for blacks in the health professions. This was probably an outgrowth of the pervasive social activism of the period, and the identified priority to increase total productivity of health profession manpower, specifically.

Our total health care industry is larger today than ever in history, employing close to 5 million people. Yet, blacks still suffer underrepresentation throughout the industry and, specifically, in the professional provider categories of physician, dentist, nurse, pharmacist, podiatrist, and optometrist, all of which are vital services for high blood pressure control in the black community.

In an article published in the *Public Health Reports*, May-June 1978, Vol. 93, No. 3, Bruce Rocheleau, Ph.D., shows that approximately 90 percent of the black physicians' patients are black compared to 7 percent of nonblack physicians' patients being black. Given the incidence and prevalence of high blood pressure in the black community, it is logical to conclude that the percentage of high blood pressure patients seen by the black physician is also significantly greater than those seen by nonblack physicians. While this is a clear indication for the need for more black physicians to service the health needs of the black community, it is also a revealing indication that the same situation is true for other health professions--dentistry, pharmacy, podiatry, optometry, and nursing. The article by Rocheleau provides added support to the demand for increasing the supply of black health manpower, specifically as it relates to high blood pressure control.

While there is some evidence of progress in the supply of black health manpower, there is a need for additional black health professions in the black community, particularly as they relate to high blood pressure control. Therefore, it is within the vested interest of the black community and the task force to examine barriers to increasing the supply of black health manpower.

2. Discussion - Items for Further Consideration

The following items have been identified by the task force for further consideration.

- There is a need for clarification and definition of the black health manpower requirements (physicians, dentists, pharmacists, podiatrists, optometrists, and nurses) for the detection, treatment, and followup of high blood pressure in the black community.

While ratios of health providers to population have been developed to indicate present manpower status and future supply and requirements, no manpower requirements have been developed for effective high blood pressure control in the black community or any other community. As investigation and experimentation with this "requirements" issue begin, the role, efficiency measures, training, and delivery systems for high blood pressure control in the black community will be affected. The precise affects are difficult if not impossible to project. However, there is little doubt that they will significantly benefit the black community in the long run. This item, required manpower, is one of the most highly charged and important issues as it relates to black health professional manpower and the high blood pressure control process.

- Investigation is necessary to examine the acceptance policies and operation of medical schools as it relates to blacks. During the last 3-4 academic years, the acceptance rate for black applicants to medical schools has decreased from approximately 44 percent to 38 percent. Of the 36,617 applicants to medical schools in 1978, 7 percent, or 2,564, were black representing a 3 percent increase from the 1977 black applicant pool of 2,487.

The Bureau of Health Manpower indicates in its booklet "Influences of Preceptorship and Other Factors on the Education and Career Choices of Physicians" that nonwhite students prefer the innercity as a practice location; given the need for high blood pressure control in the black community, which is the character of most inner cities, the need for an increase in matriculating black medical students is intensified. Further, we know from statistics that black medical students have traditionally been concentrated in the primary care specialities at a greater rate than the national average. Presently, the concentration in primary care specialities by black students is well above 60 percent. It is of direct benefit to high blood pressure control in the black community to have an increase in the aggregate numbers of black physicians and specifically primary care physicians.

- There is an urgent need to examine the acceptance rate for black applicants to schools of dentistry, pharmacy, podiatry, and optometry.

Investigation is necessary to examine the acceptance policies and procedures of schools of dentistry, pharmacy, podiatry, and optometry. As the acceptance rate drops off for these health profession schools, so do the long range benefits to our society in the form of services to the black community. It is of direct benefit, therefore, to high blood pressure control in the black community to increase the supply of black health professionals to facilitate and coordinate comprehensive care in the treatment and followup of persons suffering from high blood pressure.

- There is a need to examine the acceptance rates for black nurses in diploma, associate degree, baccalaureate degree, nurse practitioner, and doctorate degree programs.

As with the aforementioned health professions, further investigation is necessary to examine the acceptance policies and procedures of nursing programs--diploma, associate degree, baccalaureate degree, nurse practitioner, master's degree, and doctorate. Nursing is of primary importance in the high blood pressure control process for the black community. The black nurse is a central ingredient to the effective functioning of the health care team providing service to the black community and, as such, forms the backbone for health care manpower. It is, therefore, imperative to ensure the increased acceptance and matriculation of black nurses, specifically at the advanced degree levels.

- There is a need to increase the numbers and percentage of active black physicians and the number and percentage of students enrolled in medical schools.

Extensive investigation is necessary to examine the recruitment, retention, and operating policies and procedures for medical schools, specifically as it relates to blacks. Estimates of the number of active black physicians in the U.S. range from 2 to 3 percent of the total number of physicians. The low representation of black physicians is compared to a high number of foreign medical graduates in the total U.S. physician population--as of 1974, 22 percent of the total U.S. physician population were foreign medical graduates. Estimates of aggregate numbers for black physicians range from 7,000 to 9,300, compared to 77,000 foreign medical graduates. Black representation in internship and residency programs in 1968-69 academic year was 1.9 percent and 1.7 percent respectively; in 1971-72, 2.3 percent and 1.9 percent; in 1974-75, 4.3 percent and 2.1 percent. First-year enrollment for blacks in medical school for academic years 1968-69 was 2.7 percent; 1970-71, 6.1 percent; 1972-73, 7 percent; 1974-75, 7.5 percent; 1976-77, 6.7 percent; and 1978-79, 6.4 percent. Figures for total enrollment academic years 1968-69, 2.2 percent; 1970-71, 3.8 percent; 1972-73, 5.5 percent; 1974-75, 6.3 percent; 1976-77, 6.1 percent; and 1978-79, 5.7 percent.

These figures indicate a slow but steady decline in the numbers of black students being admitted and matriculating through medical schools. With the historical incentives to increase the supply of physicians and emphasis that has been placed on encouraging the production of black physicians, there appears to be little reason for such low representation of blacks in medical school. Further, with the production capacity now in place for physicians, there is a corresponding decrease in admittance rate and first-year total enrollment of black students. As was indicated earlier, high blood pressure control in the black community suffers with a decrease of black medical school graduates.

- There is a need to increase the number and percentage of active black dentists and the number and percentage of students enrolled in schools of dentistry.

Investigation is necessesary to examine the recruitment, retention, and operating policies and procedures for dental schools, specifically as it relates to blacks. Black dentists make up approximately 2.3 percent of the active dentist population in the U.S. Graduation figures for the schools of dentistry between the years 1971 and 1976 shows: 1970-71, 53 black students or 1.5 percent; 1971-72, 74 or 2.0 percent; 1972-73, 110 or 2.8 percent; 1973-74, 154 or 3.4 percent; 1974-75, 187 or 3.8 percent; 1975-76, 213 or 4.0 percent.

- There is a need to increase the number and percentage of active black pharmacists and the number and percentage of students enrolled in shcools of pharmacy.

There is a need to increase the number and percentage of active black pharmacists. There should be an examination of the operating policies, and procedures for schools of pharmacy, specifically as they relate to blacks. Only 1.8 percent of the active pharmacists in the U.S. are black. The number of black students enrolled in the last 3 years in schools of pharmacy during academic years 1971-72 through 1976-77 are as follows; 1971-72, 618 black students or 3.8 percent; 1972-73, 659 or 3.7 percent; 1973-74, 619 or 3.0 percent; 1974-75, 727 or 3.2 percent; 1975-76, 915 or 3.8 percent; and 1976-77, 938 or 4 percent. More than 50 percent of the black pharmacists students in academic year 1976-77 came from Florida A & M, Texas Southern, Xavier University, and Howard University.

The pharmacist plays a significant role as part of the health care team servicing the black community and as such is necessary in the high blood pressure control process. The number and availability of black pharmacists is of great importance to the process. The "role contribution" of the pharmacists in the high blood pressure control process has been suggested in chapters III and IV of this report.

- There is a need to increase the numbers and percentage of active black podiatrists and the numbers and percentage of students enrolled in schools of podiatric medicine.

Investigation is necessary to examine the recruitment, retention, and operating policies for schools of podiatry. specifically as it relates to blacks. Further, it would appear advisable to secure a random sampling of attitudes and information availability in the black community regarding podiatric medicine.

While the numbers of black podiatrists remain small, representing approximately 3.6 percent of the total active podiatrists, the progress among schools of podiatry for recruiting more blacks has not been impressive. In academic years 1971-72 there were 27 black students enrolled or 2.1 percent; 1972-73 there were 23 black students or 1.8 percent; 1973-74 there were 31 or 1.9 percent; and in 1976-77 there were 73 or 3.3 percent blacks.

The podiatrists play a significant role as a part of the health care team servicing the black community and as such, are important in the high blood pressure control process for the black community. The "role contribution" of podiatrists in the high blood pressure control process is necessary and has been suggested in chapter III and IV of the report.

- There is a need to examine the designation process for health manpower shortage areas and its relationship to black inner city health manpower shortage areas.

The question of health manpower shortage area designation as it relates to high blood pressure control in the black community and the requisite supply of black health manpower is of great significance. Should the designation of shortage areas overlook blighted black communities in need of health manpower, black providers, required to pay back the Federal Government through service to the community, will be unable to be of optimal assistance.

- There is a need to examine the less than adequate representation of blacks enrolled in master's degree and doctorate degree nursing programs.

Further investigation is necessary to examine the recruitment, retention, and matriculation policies and procedures, as they relate to blacks in diploma, associate degree, baccalaureate degree, master's degree and doctorate degree nursing programs. The academic year 1974-75, as reported by the Bureau of Health Manpower in a draft report on minorities and women, showed a total of 9.2 percent of the graduates from nursing programs were black, with the black percentage being 7.5 percent in diploma programs, 10.4 percent in associate degree programs, and 8.6 percent of the total number of graduates in baccalaureate degree programs. For the same academic year, Urban Health in its July/August 1978 issue's article by Audrey L. Burgress, Ed. D., R.N., reported a total of 4.66 percent black graduates from nursing programs with diploma programs; 5.6 percent in associate degree programs; and 5.2 percent in baccalaureate degree programs. The article further indicates the black enrollment in the baccalaureate programs in 1974-75 was 7.1 percent while the BHM draft indicates 9.3 percent. Clearly, the data offer disturbing discrepancies. Further clarification is necessary.

Investigation is necessary to examine the possible impact of changing the educational requirements for professional nurses, specifically as it relates to high blood pressure control in the black community. While the educational requirements for professional nuring have not changed, the trend toward the baccalaureate degree requirement is clearly visible. Given constraints of time, money, and the ever-present resistance to career mobility, the hardest hit by such additional requirements would be the black nurses. Currently blacks comprise approximately 8 percent of all nursing and 3.6 percent of registered nurses, it is therefore of vital importance that no changes be enacted which negatively effect the number of black professional nurses.

- There is a need to examine the possible effect of the elimination of capitation grants on the black community and black health manpower supply.

Investigation is necessary to examine the relationship between capitation losses and the health of the black community, specifically as it relates to high blood pressure control. The capitation grants came about as a result of the Health Professional Training Act of 1971 and served as an incentive to expand the enrollments in selected health professions. Capitation monies in 1976 focused on specific areas of health manpower, the primary care provider. The advent of capitation corresponded with an increase in black health manpower across the board. The question regarding capitation is twofold: a) Will the elimination of capitation reduce further numbers of black health manpower? and, b) Will the black community suffer losses of black primary health care providers?

There would be a direct relationship between loss of capitation monies and high blood pressure control in the black community. Should the number of primary care practitioners be reduced as a result of capitation declines or losses, high blood pressure control in the black community will suffer because of its dependence on primary care personnel.

- There is a need to examine the effects of the dwindling availability of public financial assistance, to institutions and individuals, on the black health manpower supply.

Investigation is necessary to examine the relationship between decreased public financial assistance for institutions and individuals and the health of the black community, specifically as it relates to high blood pressure control. While the possible elimination of capitation monies serves as a good example of decreased public financial assistance, the entire public policy trend, specifically as it relates to the supply of health manpower, is toward a reduction in support due to projections of adequate overall supply.

- There is a need to examine alternative financial assistance possibilities for increasing the black health manpower supply, specifically as it relates to high blood pressure control in the black community.

Investigation is necessary to examine alternative public and private sources of financial assistance for institutions and individuals as it relates to the supply of black health manpower for high blood pressure control in the black community. Alternatives must be found which do not constitute negative influences on the supply of black health manpower or the high blood pressure control process in the black community.

- There is a need to examine the impact of decreased resource availability by the public sector for black health manpower production.

Investigation is necessary to examine the effect of trends toward decreased resources in manpower as it relates to high blood pressure control in the black community and the availability of black health manpower. The emphasis of the Federal Government over the last 20 years has been on increased production in most categories relating to the services and products for the "public good," certainly increased production of health professionals. Legislative initiatives have supported manpower production by the enactment of the Health Amendments Act of 1956; PL 86-72 Public Health Services Act Amendments of 1960; PL 86-798 Public Health Research Grants; PL 87-838 Public Health Service Act Amendments of 1962; PL 88-129 Health Professions Education Assistance Act of 1963; PL 88-497 Graduate Public Health Training Amendments of 1964; PL 88-581 Nurse Training Act of 1964; PL 88-654 Loans to Students of Optometry; PL 89-290 Health Professions Education Assistance Act Amendments of 1965; PL 89-291 Medical Library Assistance Act of 1965; and PL 89-751 Allied Health Professions.

- There is a need to examine the alternatives to the National Health Service Corps (NHSC).

Investigation is needed to examine long-range alternatives to the supply and distribution of health profession manpower, specifically as it related to the control of high blood pressure in the black community. While the NHSC provides an opportunity for students to complete a course of study in a selected health profession, the access is limited. In addition, the NHSC is one of a number of programs set up to increase and specify the numbers and type of health manpower trained in the U.S. Given the increased cutting back of federally supported programs similar to NHSC, what alternatives exist for the efficient utilization and distribution of available resources?

This concern is especially of great import to the high blood pressure control process in the black community and the supply of black health manpower. The National Health Service Corps is a short-term approach to problem-solving. NHSC will not continue through the year 2000, the 20th year of the proposed national effort to control black hypertension.

- There is a need to examine the eligibility requirements for application and acceptance into the National Health Service Corps.

Investigation is necessary to examine the existing eligibility requirements for the National Health Service Corps and the possibility of focusing the program of disadvantaged students. The National Health Service Corps came into existence to increase the number of primary health providers in health manpower shortage areas. Should the program have as its primary beneficiaries disadvantaged students, the program would have the potential to add significantly to the supply of black health manpower, specifically for high blood pressure control in the black community.

While the last 20 years were spent building a production system with significant support from the public sector, the trend now is to let the system operate at present capacity with a timed phase-out of public support. Important to note is the fact that the last 10 years saw the greatest push for production and, correspondingly, the greatest increase of black health manpower. However, neither the numbers nor percentage of blacks has corresponded to or benefited from the massive increase in resources or health manpower over the last 20 years. The last 2 years of statistics for most of the health professions show a leveling off of black health students and increased difficulty in financing the education.

The trend toward leveling off manpower production and increased emphasis on primary care, distribution, and educational subsidy tied to servicing the needy public, causes increased concern for stabilizing existing gains by blacks in health manpower. Further, it demands additional analysis for creating new health manpower entry mechanisms and efficient utilization of existing channels. This is of paramount importance to present any future availability of black health manpower for high blood pressure control in the black community.

- There is a need to examine the impact of increased numbers of black women in the field of medicine, pharmacy, podiatry, optometry, and dentistry on high blood pressure control. Investigation is necessary to examine benefits gained by the increased supply of black women in medicine, pharmacy, podiatry, optometry, and dentistry. The ratio of black women to black men in both medicine and dentistry is higher than the proportion of white women to white men. What will be the overall effect of the increased proportion in the provision of high blood pressure services to the black community?

- There is a need to examine the alternatives available to black colleges in the training and development of black health manpower.

Investigation is necessary to examine the current difficulties experienced by traditionally black institutions in producing black health manpower which institutions are experiencing increased difficulty maintaining financial stability. Large numbers of blacks, along with the black community, stand to lose should these institutions suffer significant funding problems.

- There is a need to examine the requirement for black health manpower by 1990.

Investigation is necessary to examine the requirements for black health manpower by the black community as it relates to high blood pressure control. The requirements for the total manpower have been projected through 1990:

Physicians: 242.4 per 100,000 (543,000 to 571,000 in number)

Dentists: 63.4 per 100,000 (153,700)

Optometrists: 10.9 per 100,000 (25,900)

Podiatrists: 5.1 per 100,000 (16,100)

Pharmacists: 75.7 per 100,000 (190,300)

Nurses: 616 to 653 per 100,000

No mention is made in any of the projections set forth for black health manpower. However, in terms of the detection, treatment, and followup of high blood pressure in the black community, such projections are necessary. In view of the aforementioned information, that 90 percent of the black physician's patients are black compared to 7 percent for the nonblack physician, the projections for black health manpower become tremendously important.

- There is a need to examine the effect of Area Health Education Centers on increasing the number of qualified black health manpower.

Investigation is necessary to examine the impact of Area Health Education Centers on black health manpower and high blood pressure control in the black community. The Area Health Education Centers were formed as a result of the 1971 Manpower Act (PL 92-157) for the provision of alternative education experiences for health professions students. The program attempts to provide linkages between institutions and the community and, as a direct product, encourage health professionals to locate in areas in great need of health services The goals and objectives of this program seem tailor-made for high blood pressure control efforts in the black community. Thus, it would be helpful to know what programmatic efforts have been implemented or are envisioned in this area.

- There is a need to examine the barriers to increased black research manpower as it relates to high blood pressure control.

Investigation is necessary to examine the relationship between black research manpower and high blood pressure control in the black community. It is approximated that less than 2 percent of the biomedical research manpower is black, and less than 0.5 percent of researchers involved in high blood pressure control are black. Some of the suggested barriers include lack of information regarding opportunities for black students; cultural resistance to research careers; lack of adequate preparation of black students in the sciences and math; and lack of financial resources to underwrite the academic preparation.

While the National Institutes of Health has made progress in providing research opportunities for minorities through the Minority Hypertension Research Development Summer Program, the Minority Access to Research Careers Programs, and the Minority Biomedical Support Program, there remains an inadequate representation by blacks as active researchers and as students pursuing research careers.

- There is a need to examine the barriers to increasing the number of black colleges and universities receiving grant funds for increasing manpower in the basic research sciences.

Investigation is necessary to examine the relationship between increasing the research capability in black colleges and high blood pressure control in the black community. While at least one of the larger black institutions, Howard University, does participate as a primary contractor or grantee in the Minority High Blood Pressure Summer Program through the National Heart, Lung, and Blood Institute, there appears to be little involvement of other black colleges as primary sites for recruiting and training minorities as research manpower. Suggested barriers for the black colleges include: historical lack of public and private support for research; lack of necessary equipment; lack of qualified personnel; lack of proper technical assistance; uncertainty regarding grant support over time; and past and present lack of black and/or other minority representation on advisory councils, grant review committees, and Federal Government staff.

3. Recommendations

The recommendations which follow were developed by the National Black Health Providers Task Force on High Blood Pressure Control with the major focus on active implementation either in the form of legislation, policy formation, or operational procedures.

Recommendation 1: That initiatives be undertaken to ensure a more representative involvement/employment of blacks in the health care industry of the U.S. by the year 2000. The following numbers and ratios would represent meaningful progress for physicians, nurses, optometrists, pharmacists, dentists, and podiatrists.

Physicians:	Ratio of 300 per 100,000 black population; 14.4 per 100,000 total population or 36,00 total; total medical school enrollment at 20 percent by academic year 1982-1983.
Dentists:	Ratio of 89.7 per 100,000 per black population; 4.3 per 100,000 total population; or total 10,759 dentists; total dental school enrollment should be increased to 20 percent by academic year 1982-1983.

Optometrists: Ratio of 10.8 per 100,000 black population; 0.5 per 100,000 total population or 1295 total optometrists; total enrollment in schools of optometry should increase by 25 percent by academic year 1983-1984.

Podiatrists: Ratio of 9.3 per 100,000 black population; 0.5 per 100,000 total population or 1127 total podiatrists; total enrollment in schools of podiatry should increase by 20 percent by academic year of 1982-1983.

Pharmacists: Ratio of 11.1 per 100,000 black population; 5.3 per 100,000 total population or 13,321 total pharmacists; total enrollment in schools of pharmacy should be increased to 20 percent by academic year 1981-1982.

Registered Nurses: Ratio of 1,256.7 per 100,000 black population; 60.8 per 100,000 total population; total enrollment in schools of nursing should be increased to 20 percent by academic year 1981-1982.

Recommendation 2: That an institutional support program be authorized to provide financial assistance to Health Professions Education Institutions that maintain a minimum black total enrollment of 12 percent black health professions students.

Recommendation 3: That financial incentive programs be developed for the health professional schools of traditionally black institutions to increase the supply of black health manpower. These programs should be long-range propositions of 10 years or more and adequately funded to avoid financial distress and to ensure stability on the part of the institution.

Recommendation 4: That the designated health manpower shortage areas be expanded to include more black urban inner-city communities that now suffer a marginal identity.

Designations are based on population-to-practitioner ratios. Currently, designations are based on ratios higher than what is defined to be adequacy levels. This is done supposedly to "service high levels of unmet need." The result is that numerous communities are left in the middle, between shortage and adequacy. Should the designation be made in favor of those communities in the middle, we will see increased designation of urban black communities which, among other things, are in need of high blood pressure control assistance.

Recommendation 5: That the recipients of NHSC scholarships and other service conditional awards be exempt from taxation on the scholarship portion of their income. With the reduction of NHSC stipends, taxation becomes an unwanted burden.

Recommendation 6: The task force recommends that the Health Education Student Loan Program be adjusted to ease the burden of repayment by the student, specifically with regard to the length of time for repayment. It should include a deferred payment plan.

Recommendation 7: That the funds available for Health Professions Students Scholarships be increased dramatically in order to increase the number of black recipients.

Recommendation 8: That the Black Health Providers Task Force be charged with the responsibility of defining the health manpower requirements for the detection, treatment and followup of the high blood pressure control in the black community.

Recommendation 9: That the task force be charged with the responsibility of identifying health manpower alternatives for the detection, treatment, and/or followup of high blood pressure in the black community.

Examples might include linkages with an Area Health Education Centers; creation of a community based nutrition center and co-op food purchasing service; creation of a community based counseling, maintenance and high blood pressure education center; or linkages with existing black health manpower resources in the community.

Recommendation 10: That the programs which forgive nursing and medical student loans through service in health manpower shortage areas be extended indefinitely and be expanded to include other professions --podiatry, optometry, pharmacy, dentistry.

Recommendation 11: That more monies be earmarked for black colleges and universities for the development of research training programs, specifically as they relate to high blood pressure research.

Recommendation 12: That registered nurses be included among the other health professions assessed in the designation and assignment of health manpower shortage areas.

Recommendation 13: That smaller geographic units be utilized in the designation of health manpower shortage areas in order to address the unrecognized and acute manpower shortages in the inner city.

I. Pediatric High Blood Pressure Issues

1. Background

The experiences of many task force members, and observations made by task force staff at delivery sites serving black children, indicate an increasingly prevalent belief among providers who treat black children as to the impact of high blood pressure upon black children, and particularly among males between the ages of 12 to 14. As yet, no known reporting system yields statistical data to support this belief. However, the anecdotal findings of so many reputable providers cannot be ignored.

The families of hypertensives, and the children of hypertensive parents and their offspring, are twice as likely to have high blood pressure as people whose siblings and parents have normal pressure. Often, parents or grandparents, although never diagnosed as having had high blood pressure, suffered kidney or heart disease, or stroke, any one of which may have indicated prior elevated pressure. Given that, historically, many blacks were denied access to health services where diagnoses might have been made, it is not surprising that the incidence of kidney and heart diseases, stroke and other ailments could have developed in the absence of previous identification of elevated blood pressure.

Another contributing factor to the lack of high blood pressure detection and diagnosis among blacks may be inadequate history taking by some health care providers or their support staff. This difficulty is further exacerbated if the provider or history-taker is unfamiliar with the vernacular employed by many blacks, if the blacks are unfamiliar with the terminology employed by many providers and if the providers do not recognize that certain culturally rooted health beliefs among some blacks must be understood in order to comprehend fully the familial background and current status of the black child and its family.

The American Academy of Pediatrics states that children from families such as those described above may exhibit a tendency toward high blood pressure as early as age 2, particularly in instances where both parents have been diagnosed as hypertensive.

Every child with a family background of high blood pressure will not automatically suffer from the disease. Many children without a family background of high blood pressure develop the disease. However, since some studies indicate an inherited susceptibility which may be activated by such factors as stress, kidney infection, obesity or high sodium intake, the task force suggests that these factors should be recognized as triggers and avoided carefully.

The task force believes that the reduction of high blood pressure to a minimum level in blacks requires intervention of the health care of the entire family, with the long-term intention of preventing or managing this increasingly visible disease among black children.

2. Recommendations

Recommendation 1: That all federally funded or supported health care facilities and providers offering maternal and child health services be required to have effective pediatric high blood pressure detection programs which are comprehensive and which emphasize prevention.

Justification: Many patients served by federally funded or supported health programs come from those populations most likely to have or develop high blood pressure. Of the susceptible group, blacks are the single largest population served. For example, federally funded or supported community health centers serve a population which is 80 percent black, according to the Health of the Disadvantaged Chartbook, HRA, 1977. Therefore, the task force states that uniformly effective, early detection and control services in these health programs would reach large numbers of vulnerable black families and serve to encourage nonfederally sponsored providers to follow their practices.

Recommendation 2: That the Model High Blood Pressure Control Process developed by the task force be reviewed by an appropriate panel of black clinicians convened at the national level to determine whether a pediatric version of the process should be developed.

Justification: Such a panel would, in the course of its deliberations, describe the extent of black pediatric high blood pressure, identify unique characteristics of high blood pressure as it applies to black children and their families, and encourage providers to consider more carefully high blood pressure in history taking, detection, treatment, counseling and total health management.

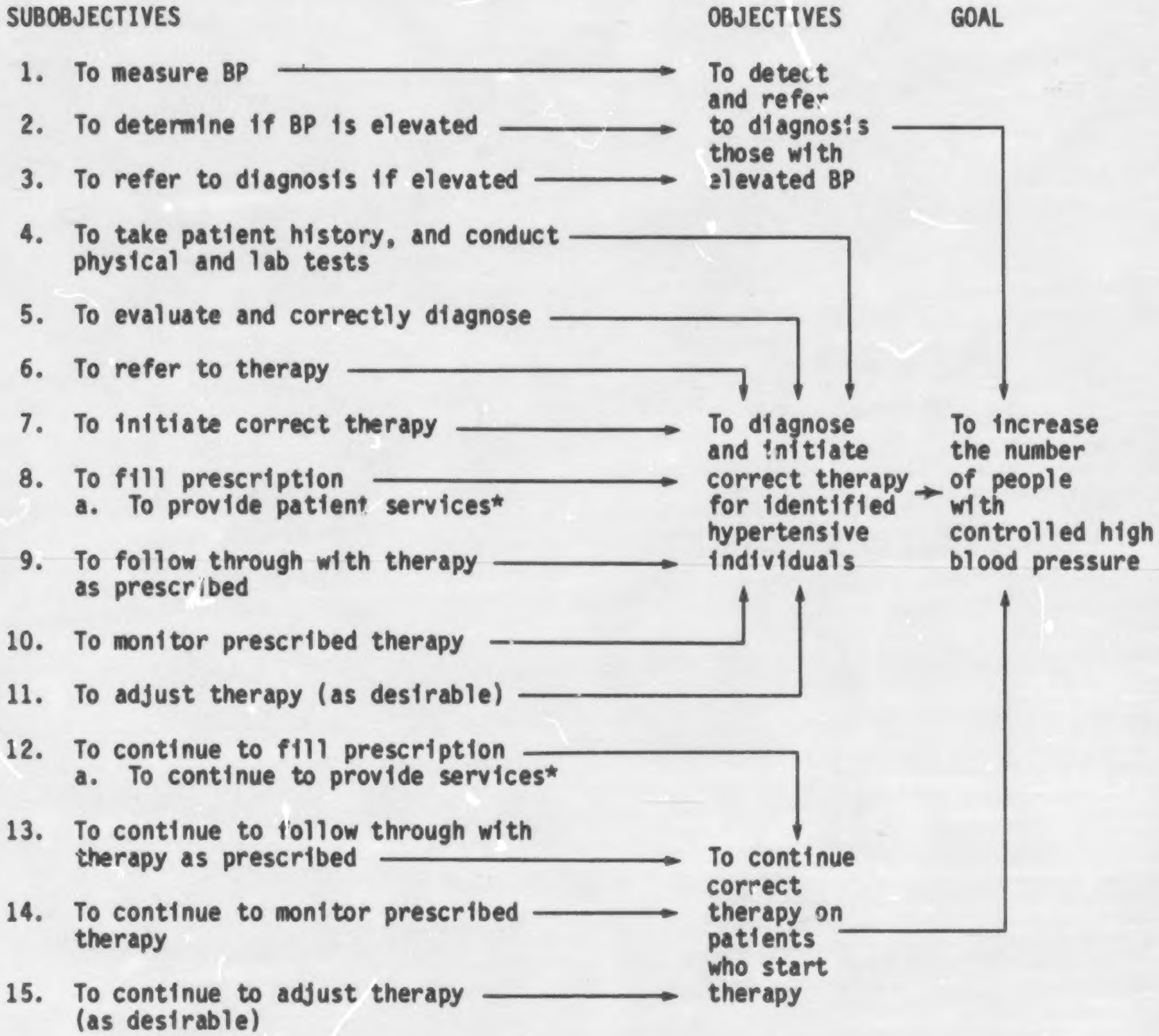
Recommendation 3: That the labeling of children as hypertensive by providers should be avoided so that an overall health program, rather than drug therapy alone, may be implemented.

Justification: Because drug therapy for up to 70 years may be unrealistic, and the overall effect of such long-term therapy is unknown at this time, a comprehensive health program must be considered for hypertensive children. Such a program should include the monitoring and counseling of families where elevated pressure has been observed. Monitoring would consist of evaluation of salt intake, periodic pressure readings, and surveillance of other cardiovascular risk factors. Counseling would consist of weight reduction or control methods, motivational support for physical fitness activites, and motivational support to prevent or terminate the use of tobacco or drugs.

Recommendation 4: That health providers include the families of hypertensive children as partners in the overall health program of their children.

Justification: An informed, conscientious family may make an immeasurable contribution to the successful treatment of the child. If the family is not informed, this may be reflected in the child's progress. Where there is a stressful environment for the child in the home, a discerning clinician may, through appropriate referral, be of assistance to a family with emotional, somatic or economic problems, or consider a responsive treatment regimen.

EXHIBIT 16. Goal, Objectives, Subobjectives of HBP Control



SUBOBJECTIVES

1. To measure BP
2. To determine if BP is elevated
3. To refer to diagnosis if elevated
4. To take patient history, and conduct physical and lab tests
5. To evaluate and correctly diagnose
6. To refer to therapy
7. To initiate correct therapy
8. To fill prescription
    a. To provide patient services*
9. To follow through with therapy as prescribed
10. To monitor prescribed therapy
11. To adjust therapy (as desirable)
12. To continue to fill prescription
    a. To continue to provide services*
13. To continue to follow through with therapy as prescribed
14. To continue to monitor prescribed therapy
15. To continue to adjust therapy (as desirable)

OBJECTIVES

To detect and refer to diagnosis those with elevated BP

To diagnose and initiate correct therapy for identified hypertensive individuals

To continue correct therapy on patients who start therapy

GOAL

To increase the number of people with controlled high blood pressure

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*Services related to adjunctive factors and behavioral approaches.

J. Financial Barriers

1. Background

This section of the final report considers financial considerations in the operational aspects of high blood pressure control (i.e., detection, referral, treatment, maintenance). To resolve financial barrier questions, three sets of issues must be considered.

- For what services and products must payment be made?
- Who will make the payment?
- Who will receive the payment?

For what services and products must payment be made?

Essentially, there are no free high blood pressure control services. Although the beneficiary of a service might not pay for it in certain situations, the costs are borne by someone--providers, government, etc. The services and products for which payment must be made can be related to the high blood pressure control process outlined in the following exhibit.

Generally, the products and services by phase can be viewed as having the following elements of costs.

1. Detection and referral phase
    - a. Providers and other personnel who measure blood pressure--Fees
    - b. Providers and other personnel who refer and follow up on referral--Fees
    - c. Facilities and equipment (usually a partial allocation of total institutional or office costs to the blood pressure program)
2. Control phase
    - a. Physician who diagnoses high blood pressure and manages the process of attaining goal pressure--Fees
    - b. Drugs
    - c. Facilities and equipment (partial costs)
    - d. Providers and other personnel who will assist patient in lifestyle changes--Fees
    - e. Providers and other personnel who will assist patient in adherence of regimen--Fees

325

3. Long-Term Maintenance

   a. Physician who adjusts regimen as indicated and manages long-term maintenance--Fees

   b. Drugs

   c. Facilities and equipment (partial costs)

   d. Providers and other personnel who assist patient in sustaining lifestyle changes--Fees

   e. Providers and other personnel who assist patient in adherence to regimen (e.g., continuous motivation, adjustment to side effects, etc.)--Fees

Who pays for the high blood pressure control services and products?

Viewed at its most basic level, this question can be answered in the following ways:

- The patient can pay directly.

- Groups of persons can pay indirectly through group insurance, HMO membership or similiar arrangements.

- The provider can pay by absorbing the cost of the service (this alternative may have an economic impact of raising overhead expenses which could be added to the fees of all paying patients).

- Combinations of the above (e.g., deductibles paid by the patient with the remainder paid by a group of people, as in group health insurance).

- None of the above (services not sought or received).

Of special concern to the task force are those persons who are not able to pay. This includes those who are not medically self-sufficient through personal resources or private third-party coverage and who are not eligible for public third-party payor programs that cover HBP services. These are the so-called "gray area" persons concerning whom recommendations follow later in this section.

Who will receive the payment?

Generally, the practice acts in the several states govern those disciplines that can receive direct payment for services. Other personnel (e.g., paraprofessionals) often may be part of the staff and cost structure of a provider in a covered discipline. The issue becomes one of which providers should be paid for which HBP control services.

Related questions are ones of control of provider abuse and inappropriate utilization by patients. Figure 1 of this section outlines a conceptual framework for addressing the issue of who receives payment. Each cell in the matrix can be used to indicate who should be paid, for what category of service, from what payment source.

2. Recommendations

Recommendation 1: Persons in the financial "gray area" should be covered for hypertension therapy under a suitable public program such as Title XVIII (Medicare) of the Social Security Act or other suitable legislation.

The cost of caring for the sequelae of high blood pressure is a significant factor in the Nation's health care costs. Without universally available health insurance coverage, a categorical approach is recommended to help preserve the health, lives and potential contributions to society, of persons in this "gray area" category who have high blood pressure.

Recommendation 2: The Medicaid programs should undertake an intensive 5-year effort to detect and bring into effective control hypertensives who are Medicaid recipients. This effort should include drug coverage for antihypertensive medications.

Justification: For welfare recipients Medicaid finances the outpatient and inpatient care of these recipients. State welfare systems provide income support. By emphasizing HBP services which will tend to prevent strokes and other disabling sequelae, the mechanism is established for reducing inpatient costs in the long run and for increasing the pool of productive persons for the work force. Provider and patient abuse control systems should be included in this effort.

Recommendation 3: Private third-party payors should be encouraged to include antihypertensive medications and treatments in their most widely utilized benefits packages.

Justification: In the long run, employers, employee group members and the third-party payors can be expected to maintain a more controlled hypertensive population, reducing stroke incidence, etc., with the resultant increase in lifetime productivity and earnings.

Recommendation 4: The Medicare program should be expanded to include drug coverage for antihypertensive medications.

Justification: For older persons living on fixed incomes, each increment of health care cost can have a negative effect on personnal budgets. For some, the daily cost for blood pressure medication may pose an unnecessary barrier to compliance. By including drug coverage for antihypertensive medications in the Medicare program, this financial barrier could be eliminated.

Figure 1. Analysis of possible provider payments by high blood pressure control objective

OBJECTIVE	PROVIDER									
	Dentists	Diet, Nutrition Counselors	Health Educators	Nurses Other than NP's	Optometrists	Pharmacists	Physicians	Podiatrists	Screeners Non-Providers	Social Workers (Clinic)
Detection	No fee except Medicaid	Salary	Salary	Salary	No fee except Medicaid	Fee, if follows NBHPTF Recs	Part of regular fee	No fee except Medicaid	Salary or Volunteer	Salary
Control	No fee	Salary	Salary	Salary	No fee	No fee	Part of regular fee	No fee	Salary or Volunteer	Salary
Maintenance	No fee	Salary	Salary	Salary	No fee	No fee	Part of regular fee	No fee	Salary or Volunteer	Salary

Recommendation 5: **The appropriate Federal agencies should make arrangements to assure that persons participating in high blood pressure clinical trials have adequate financial means to continue antihypertensive regimens at the conclusion of such trials.**

Justification: Persons participating in clinical trials often have access to model delivery systems which are free of the types of financial constraints found often in more typical community delivery systems. The task force's view is that volunteers who have served the interests of the scientific community and the public by participating in such trials should be able to receive care in an effective delivery system once the trials have been concluded. Financial barriers may prevent some persons from participating in an appropriate system.

The task force believes that designated Federal agencies should provide such counseling, referral or direct assistance as may be required to assure the removal of financial barriers to care after the conclusion of clinical trials.

3. Issues for Further Study

A. Cost benefit analyses need to be developed for long-term HBP treatment. Conventional wisdom suggests that ambulatory, low unit cost HBP services are less costly in the long run, than treatment of stroke, kidney failure, etc. Appropriate analyses need to be done on this topic to provide quantitative support for the health care financing entities to take the desired actions in this area. Models such as those developed by Sondik, et al., may be helpful.*

B. The cost effectiveness of community-wide HBP registry systems needs to be ascertained.

In theory, registry systems appear to present attractive mechanisms for nonduplicative monitoring of hypertensives; more rigorous studies need to be conducted to determine if such systems are applicable to decentralized pluralistic delivery systems of the type found in areas with significant black populations.

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*Sondik, E., et al.: An Interactive Computer-Based Model of a National High Blood Pressure Program. Paper presented to Fifth National Conference on High Blood Pressure Control.

C. The appropriate payment mechanism for health education and compliance support should be analyzed for decentralized pluralistic delivery systems.

Studies by Finnerty,* Wellons** and others suggest that compliance improves remarkably with proper support systems. However, most of these studies have focused on hospitals and health centers. Even in these settings, financing is related often to short-term grant support. Suitable long-term approaches must be found that can apply to all elements in a community's delivery systems.

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* Finnerty, F.S.: Hypertension in the Inner City. American Family Physician 5:80-81, March 1972. Also, Hypertension in the Inner City I. Analysis of Clinic Dropouts. Circulation 47:73-75, January 1973.

** Wellons, R.V., et al.: Effects of Social Support on Adherence to Therapeutic Regimens; Paper presented to Fifth National Conference on High Blood Pressure Control.

3[illegible]1

K. Physician Assistants and Nurse Practitioners

1. Introduction

The physician assistant and nurse practitioner are known as "the new health practitioners" because of their recent entry into the health care professions in the U.S. While the first training programs were started in 1965, it was not until 1971 that the training of physician assistants and nurse practitioners began to blossom. The Nurse Training Act and Comprehensive Health Manpower Training Act of 1971 formed the basis for expanded training of the "new health practitioner." As with the expanded production capability of medical schools, the training of physician assistants and nurse practitioners was encouraged in 1976 with the Health Professions Educational Assistance Act. The true intent of increasing the numbers of health practitioners was to address the problem of providing quality primary care to needy populations both rural and urban.

While the nurse practitioner and physician assistant have similarities, there are differences in training and function. The physician assistant is trained to respond to commonly encountered emergency care situations; take comprehensive health history; perform comprehensive physical examination; perform basic treatment procedures; and perform simple diagnostic laboratory determinations. In addition, the physician assistant provides service under the supervision and delegatory authority of the physician. Most training programs for physician assistants are for 2 years and have a systemic emphasis similar to the physician's training. The nurse practitioner, on the other hand, must be a registered nurse and can be trained in a number of different areas--nurse midwife, pediatric nurse, maternity nurse, psychiatric nurse. They can be involved in certificate programs ranging from 3 to 15 months in duration or master's degree programs lasting 9 to 26 months. Further, their training tends to have a psychosocial emphasis, essentially expanding the nursing role.

Today the population of nurse practitioners and physician assistants continues to increase with numerous questions regarding roles, responsibilities, future needs, and appropriateness. In view of this, it was necessary for the Black Health Providers Task Force to examine the relationship of the nurse practitioner and physician assistant to the high blood pressure control process in the black community.

2. Discussion

The NBHPTF construed its charge as concerning primarily the traditional health professions. Thus, it was not possible to develop fully the roles of physician extenders due to time constraints. The following items have been identified by the National Black Health Providers Task Force on High Blood Pressure Education Control for further consideration by the appropriate bodies. The items include the following:

- There is a need to increase the numbers and percentage of active black nurse practitioners and physician assistants and the numbers and percentage of students enrolled in accredited nurse practitioner and physician assistant programs.

Investigation is necessary to examine the recruitment, retention, and matriculation policies and procedures for nurse practitioner and physician assistant programs, specifically as they relate to blacks. With the number of active black physician assistants and nurse practitioners representing less than 5 percent of the total now practicing, the necessity for increasing black representation in these emerging professions is a priority.

The physician assistant and nurse practitioner have begun to be recognized as significant contributors to the health care team servicing the black community, specifically as it related to the high blood pressure control process. Further investigation of the "role contribution" of the physician assistant and nurse practitioner in the high blood pressure control process is necessary.

- There is a need to define the precise role, function and responsibility of the nurse practitioner and physician assistant, specifically as it relates to the high blood pressure control process in the black community.

Further investigation of the role of the nurse practitioner and physician assistant in the high blood pressure control process is necessary. While the physician assistant and nurse practitioner have been trained generally to 1) perform full and complete physical examinations, 2) take full health history, 3) develop appropriate assessments, 4) order and interpret laboratory tests, and 5) perform a number of other functions applicable to the provision of quality primary care, their provider role in the high blood pressure control process, specifically as it relates to the black community needs to be articulated clearly.

- There is a need for clarification and definition of the physician assistant and nurse practitioner manpower requirements for the detection, treatment, and followup of high blood pressure in the black community.

As the roles of the health professions are defined in the high blood pressure control process, supply ratios and manpower requirements must also be developed. Further investigation and experimentation regarding efficient use of nurse practitioners and physician assistants is necessary before developing the requirement projections. While a major focus of utilization of physician assistants and nurse practitioners is directed toward increased primary care accessibility for needy populations, the precise requirement for these services in the black community for detection, treatment, and followup of high blood pressure remains unclear.

Questions for clarification and definition relating to the role of the nurse practitioner and physician assistant in the high blood pressure control process are as follows. Under what circumstances and supervision:

- Should the NP and PA take patient histories, conduct physical examination, and perform lab tests?
- Should the NP and PA initiate high blood pressure therapy?
- Should the NP and PA prescribe high blood pressure medication?
- Should the NP and PA fill the high blood pressure prescription?
- Should the NP and PA adjust high blood pressure therapy and thus adjust drug dosage?
- Should the NP and PA prescribe medication continually for patients under control?
- Should the NP and PA fill the prescription continually for patients under control?
- Should the NP and PA conduct followup histories and/or physicals?
- What are the responsibilities and liabilities of the NP and PA?

- There is a need to clarify the legal limitations and freedoms as they relate to the practices of nurse practitioners and physician assistants.

Further investigation of state law restrictions, qualifications, and requirements regarding nurse practitioners and physician assistants is necessary, specifically as it relates to high blood pressure control in the black community. There is considerable question regarding the licensure and certification requirements for nurse practitioners and physician assistants throughout the country, specifically as it relates to the limits of their practice without the physician's approval or supervision. Examples of some state regulations relating to nurse practitioners and physician assistants are as follows (as of the summer of 1979):

- In North Carolina the nurse practitioner can prescribe drugs when part of standing orders but prescriptions must be countersigned by a physician within 72 hours. No refills or controlled substances can be prescribed.
- In Arizona the nurse practitioner can dispense prepackaged labeled drugs under specified conditions. They can regulate or adjust medications and treatments as prescribed or authorized by a physician.

- In California the nurse practitioner in certain approved pilot programs can prescribe, dispense, and administer drugs.

- In Michigan physician assistants are permitted to prescribe other than controlled substances as a delegated act.

- In Missouri, Connecticut, Tennessee, North Dakota, and Wyoming physician assistants are prohibited from the prescription and dispensing of drugs.

The above examples of state regulatory inconsistencies and conflicts regarding prescribing of drugs by physician assistants and nurse practitioners are of major concern when assessing national strategies for the possible use and efficiency of nurse practitioners and physician assistants in the high blood pressure control process in the black community.

- There is a need to clarify and define the cost implications relating to utilizing physician assistants and nurse practitioners in the high blood pressure control process for the black community.

Investigation is necessary to examine the cost implications for utilizing physician assistants and nurse practitioners in the black community for high blood pressure control. This is suggested by the use of nurse practitioners and physician assistants in all settings (institutional, solo practice, HMO, group practice). The reduction in salary costs (versus use of M.D.) could contribute to an overall decrease in the cost of care. Should the benefits in cost savings be significant, the demand for and use of physician assistants and nurse practitioners in the high blood pressure control process for the black community could be greatly increased. The relevant additional questions are those of quality of care and local acceptance.

- There is a need to clarify the policy of the Federal Government and third-party payers regarding reimbursement for utilization of physician assistants and nurse practitioners in high blood pressure control.

Further investigation is necessary to examine the policies and operations of third-party payers and the Federal Government as it relates to services provided in high blood pressure control. This should include investigation of the relationship between the Federal Government and third-party payers; the Federal Government and clinics; third-party payers and clinics; and the state government as a payer. These factors specifically relate to reimbursement for high blood pressure control. Certain third-party payers in California reimburse 100 percent for services performed by nurse practitioners and physician assistants, however, this is not true for every state. The Federal Government experimented with a percentage reimbursement approach with little success.

The question of reimbursement is extremely important for high blood pressure detection, treatment and followup in the black community, along with projected utilization of physician assistants and nurse practitioners.

- There is a need to examine the quality of care provided by the nurse practitioner and physician assistant, specifically as it relates to high blood pressure control in the black community.

Questions of role, utilization, and projected requirements for nurse practitioners and physician assistants as a part of the health care team servicing the high blood pressure control needs of the black community rest heavily on the issue of "quality of care." Information in this area will serve to direct use and acceptance of the role and function of nurse practitioners and physician assistants.

- There is a need to examine where nurse practitioners and physician assistants choose to practice.

Investigation is necessary to examine the practice locations (urban, rural, suburban) of black nurse practitioners and physician assistants. In most instances the process of high blood pressure control in the black community requries hard work, limited monetary rewards, routine procedures, and can involve trying environmental conditions. Therefore, by review and assessment of the practice locations of the nurse practitioners and physician assistants, projections can be made for their appropriate utilization in the high blood pressure control process in the black community.

- There is a need to examine the acceptance of physician assistants and nurse practitioners as a part of the health care team servicing the high blood pressure needs of the black community.

Further investigation is necessary to examine the extent and nature of acceptance of nurse practitioners and physician assistants (the new practitioners) by physicians, dentists, pharmacists, podiatrists, optometrists, nurses and patients. The ability of the nurse practitioners and physician assistants to be productive in their service to the black community as it relates to the detection, treatment, and followup of high blood pressure is directly related to the acceptance of their role and function responsibility by other health professions. Therefore, it is required that further investigation be conducted.

- There is a need to examine the effect of the organizational structure and institutional goals on the utilization, productivity and cost effectiveness of nurse practitioners and physician assistants as it relates to high blood pressure control in the black community. As the role and function of other health professions are defined for various practice settings and organizational structures, specifically as it relates to the detection, treatment and followup of high blood pressure in the black community, it is necessary to analyze what, how, and where nurse practitioners and physician assistants fit into these settings and structures.

3. Recommendations

The recommendations which follow have been developed by the National Black Health Providers Task Force on High Blood Pressure Education and Control with an emphasis on operational procedures and legislation. Additionally, the task force defines the recommendations as directly related to the control of high blood pressure in the black community. The recommendations are as follows:

1. That physician assistants and nurse practitioners not be permitted to prescribe medication for high blood pressure control without a physician's approval and where states permit the prescription of drugs by NP's and PA's that the regulations be changed to be consistent with this recommendation.

2. That inequity, where it exists, of reimbursement to nurse practitioners and physician assistants must be corrected and appropriate reimbursement mechanisms be determined for their service in high blood pressure control.

3. That special funding be made available to nurse practitioner and physician assistant programs for recruitment and retention of blacks.

   A program of this nature is particularly necessary now given the relative newness of the programs, the level of support provided by the Federal Government, and the underrepresentation of blacks in the professions.

4. That the manpower requirements for nurse practitioners and physicians assistants, as they relate to high blood pressure control in the black community be defined by the Black Health Provider Task Force Constituent Organizations, specifically as it relates to such factors as education, geographic population distribution, economics, and risk factors.

5. That minimum certification and licensure requirements for nurse practitioners and physician assistants regarding the provision of high blood pressure control services to the black community be defined by the Black Health Providers Task Force Constituent Organizations.

6. That high blood pressure patients in the black community being serviced by nurse practitioners and physician assistants be required to be seen by a physician at least once a year.

7. That quality of care be defined for nurse practitioners and physician assistants by the Black Health Providers Task Force Constituent Organizations, specifically as it relates to the high blood pressure control in the black community.

Appendix A

SUMMARY OF PROVIDER ROLES BY SETTING

During the course of the NBHPTF's deliberations, each provider working group was requested to identify those health service delivery settings in which its association's members were most active. Thus, proposed roles for each profession were defined for each such setting.

In analyzing the potential for interaction and cooperation it must be noted that not all providers would be present in all settings. For example, NBNA's members (registered nurses primarily) are not usually found in the offices of solo physicians.

The following aggregation of settings has been used in this summary:

"Solo" Practice

- Solo Practising Dentists
- Solo Practising Physicians
- Nurses in Visiting Nurses Associations
- Solo Practising Optometrists
- Pharmacists in Independently Owned Pharmacies (Please note that the chain pharmacy role suggestions were comparable roughly to the independents' roles. Barrier perceptions were different, however.)
- Solo Practising Podiatrists

Community Health Center (CHC)/Health Maintenance Organizations (HMO)

- Dentists in CHC's
- Physicians in CHC's
- Nurses in CHC's
- Optometrists in Group Practice-type HMO's (This HMO role was perceived by staff as being comparable to CHC's.)
- Pharmacists in CHC's
- Podiatrists in CHC's

Hospital

- Dentists in Hospital Dental Clinics
- Physicians in Hospital Outpatient Departments
- Nurses in Hospital Outpatient Departments and Emergency Rooms
- Clinical Pharmacists in Hospitals
- Podiatrists in Hospitals

Other

- Physicians in Group Practice
- Optometrists in Group Practice
- Pharmacists in Chain Pharmacies

- Optometrists in Group Practice-type HMO's (This HMO role was perceived by staff as being comparable to CHC's.)
- Pharmacists in CHC's
- Podistrists in CHC's

Hospital

- Dentists in Hospital Dental Clinics
- Physicians in Hospital Outpatient Departments
- Nurses in Hospital Outpatient Departments and Emergency Rooms
- Clinical Pharmacists in Hospitals
- Podiatrists in Hospitals

Other

- Physicians in Group Practice
- Optometrists in Group Practice
- Pharmacists in Chain Pharmacies

PRACTICE SETTING: SOLO

Function 1. Subobjective: To measure blood pressure

	Dentistry	Medicine	Nursing*	Optometry	Pharmacy**	Podiatry
1. Measures blood pressure accurately in a manner consistent with scientific principles						
a. Provides a quiet environment	Perform Supervise	Supervise Perform	Perform Supervise	Supervise Perform	Perform Supervise	Perform Supervise
b. Positions patient and equipment properly	Perform Supervise	Supervise Perform	Perform Supervise	Supervise Perform	Perform Supervise	Perform Supervise
c. Palpates pulse prior to auscultating.	Perform Supervise	Supervise Perform	Perform Supervise	Supervise Perform	Perform Supervise	Perform Supervise
d. Takes blood pressure in more than one extremity and/or position when indicated	Perform Supervise	Supervise Perform	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise
e. Communicates orally and in writing significant information to other health team members	Perform Supervise	Supervise Perform	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise
f. Records diastolic findings according to recommendations of American Heart Association	Perform Supervise	Supervise Perform	Perform Supervise	Supervise Perform	Perform Supervise	Perform Supervise

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* Visiting Nurses Association (VNA) Setting

**Independent Setting

PRACTICE SETTING: SOLO

Function 2. Subobjective: To determine if blood pressure is elevated

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Recheck blood pressure	Perform Supervise	Perform Supervise	Perform Supervise	Supervise Perform	Perform Supervise	Perform Supervise
2.	Calculate average values	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise
3.	Utilize age/BP table to determine recommended action	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise
4.	Inform patient of readings and the recommended actions	Perform Refer Consult	Perform Refer Consult Supervise	Perform Refer Consult	Perform Refer Consult	Perform Refer Consult Supervise	Perform Refer Consult

SETTING: SOLO

Function 3. Subobjective: To refer to diagnosis if elevated

		Dentistry	Medicine	Nursing*	Optometry	Pharmacy**	Podiatry
1.	Contact provider who will diagnose	Perform Supervise	Perform Supervise	Perform Supervise	Perform Supervise	Perform* Supervise	Perform Supervise
2.	Make appointment	Perform Refer Assist	Perform Refer Assist	Perform Refer Assist	Perform Refer Supervise	None	Perform Refer Assist
3.	Followup to confirm kept appointment	Perform	Perform	Perform	Perform	Perform**	Perform
4.	Followup examinees not making or keeping appointments	None	Supervise	Perform	None	None	None
4a.	Note action in record	Perform	Perform	Perform	Perform	Perform	Perform

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* The pharmacist or his assistant would perform this activity only in exceptional cases (e.g., patient is a treatment dropout).

**Only in life-threatening situations.

SETTING: SOLO

Function 4. Subobjective: To take patient history and conduct physical and lab tests

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Conduct patient interview (history)	Perform	Perform Supervise	Perform Assist	Perform	Perform	
2.	Examine fundi	None	Perform Supervise	None*	Perform	None	
3.	Examine heart	None	Perform Supervise	None*	None	None	
4.	Examine peripheral pulses	Perform	Perform Supervise	None*	None	Perform	
5.	Recognize findings that suggest secondary forms of hypertension	Perform Refer	Perform Supervise	None*	Perform Refer	Perform Refer	

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* Extended role nurse may have a role in some settings. This needs further definition.

SETTING: SOLO

Function 5. Subobjective: Evaluate and diagnose correctly

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Interpret basic studies	None	Perform	Perform Refer	None	None	None*
2. Order and interpret special studies	None	Perform	Assist Refer	None	None	None*
3. Evaluate findings	None	Perform	Assist	None	None	None*
4. Explain findings and nature of HBP control to patient	None	Perform	Perform	None	None	None*

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*Legal restrictions.

SETTING: SOLO

Function 6. Subobjective: To refer to therapy

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Refer patient	None	Perform	Perform	None	None	None
2.	Establish tickler to followup referrals	None	Perform Supervise	Perform	None	None	None
3.	Followup referred patients who did not report	None	Perform	Perform	None	None	None

SETTING: SOLO

Function 7. Subobjective: To initiate therapy

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Set goal for BP reduction	None	Perform	Assist	None	None	None
2.	Develop treatment plan (e.g., stepped care)	None	Perform Consult	Assist	None	None	None
3.	Educate patients re: HBP its complications importance of therapy, potential compliance difficulties	Assist	Perform Supervise	Perform	Assist	Assist	Assist
4.	Recommend adjunctive measures	None	Perform Consult	Perform	None	None	None
5.	Help alleviate pathogenic psychosocial stress	None	Refer	Assist Refer	None	None	None
6.	Identify behavioral aids (e.g., biofeedback, meditation, etc.)	None	Refer	Refer Assist	None	None	None
7.	Handle HBP emergencies	Refer Assist	Perform Supervise Assist	Refer Assist	Refer Assist	Refer Assist	Refer Assist
8.	Prescribe medication	None	Perform	None	None	Consult	None

SETTING: SOLO

Function 8. Subobjective: To fill prescription

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Consider possible drug interactions	None	Perform	Perform	None	Perform	None
2.	Instruct patient	None	Supervise Perform	Perform	None	Perform	None
3.	Consider adverse reactions	None	Perform	Perform Consult*	None	Consult	None
4.	Consider efficacy of drugs	None	Perform	Perform	None	Perform	None
5.	Dispense medication	None	Perform	None	None	Perform	None
6.	Establish medication records	None	Supervise Perform	Perform**	None	Perform	None
7.	Establish followup date with patient	None	Perform	Perform**	None	None	None
8.	Prepare special dosage forms	--	--	--	--	None	--

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* If no other professionals are available.

**Nurses should document only.

SETTING: SOLO

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Refer to service	None	Supervise Perform	Perform	None	None	None
2.	Agree on goals	None	Perform	Perform	None	None	None
3.	Include family and others in support system	None	Assist	Perform	None	None	None
4.	Provide service	None	Refer	Perform	None	None	None

SETTING: SOLO

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Take medication	Assist	Assist	Supervise Assist	Assist	Assist	Assist
2.	Change elements of life-style	None	Refer Assist	Refer Assist	None	None	None
3.	Follow behavioral approaches as aids in control	None	Assist Refer	Refer Assist Supervise	None	None	None

SETTING: SOLO

Function 10. Subobjective: To monitor prescribed therapy

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Organize return visits program	None	Supervise Perform	Perform	None	Assist	None
2.	Ascertain side effects problems	Refer	Supervise Perform	Perform	Assist Refer	Assist Consult	Refer Assist
3.	Measure BP for progress toward goal	Perform	Perform Supervise	Perform	Perform	Perform	Perform
4.	Conduct followup history/physical	None	Perform Supervise	Perform Assist*-History Perform Perform**-Physical	None	None	None
5.	Help patient to improve compliance	Perform	Supervise Assist	Perform Refer	Perform	Perform	Perform
6.	Ascertain resolution of psychosocial stress	None	Assist Refer	Perform Refer	None	None	None
7.	Followup on dropouts and fadeouts	None	Supervise	Perform	None	None	None
8.	Counsel patient on distinction between "control" and "cure"	Perform	Perform Supervise	Perform	None	Perform	Perform
9.	Counsel patient on distinction between "nervous tension" and hypertension	Perform	Perform Supervise	Perform	None	Perform	Perform

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* Per doctor's orders.
**Suggested role for extended role nurse.

SETTING: SOLO

Function 11. Subobjective: To adjust therapy (as desirable)

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Adjust drug dosage	Refer	Perform Consult	Refer	Refer	Refer	Refer
2. Obtain adjunctive lifestyle changes	None	Assist Refer	Perform	None	None	None
3. Establish followup date and method	None	Perform Consult	Perform	None	None	None

SETTING: SOLO

Function 12. Subobjective: To continue to fill prescription

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Consider possible drug interactions	None	Perform	Perform	None	Perform	None
2.	Instruct patient	None	Supervise Perform	Perform	None	Perform	None
3.	Consider adverse reactions	None	Perform	Perform Consult*	None	Consult	None
4.	Consider efficacy of drugs	None	Perform	Perform	None	Perform	None
5.	Dispense medication	None	Perform	None	None	Perform	None
6.	Establish medication records	None	Supervise Perform	Perform**	None	Perform	None
7.	Establish followup date with patient	None	Perform	Perform**	None	None	None
8.	Prepare special dosage forms	--	--	--	--	None	--

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* If no other professionals are available.

** Nurses should document only.

PRACTICE SETTING: SOLO

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Refer to service	None	Supervise Perform	Perform	None	None	None
2. Agree on goals	None	Perform	Perform	None	None	None
3. Include family and others in support system	None	Assist	Perform	None	None	None
4. Provide service	None	Refer	Perform	None	None	None

SETTING: SOLO

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Take medication	Assist	Assist	Supervise Assist	Assist	Assist	Assist
2. Change elements of lifestyle	None	Refer Assist	Refer Assist	Assist	None	None
3. Follow behavioral approaches as aids in control	None	Assist Refer	Perform	None	None	None

SETTING: SOLO

Function 14. Subobjective: To continue to monitor prescribed therapy

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Organize return visits program	None	Supervise Perform	Perform	None	Assist	None
2.	Ascertain side effects problems	Assist Refer	Supervise Perform	Perform	Assist Refer	Assist Consult	Refer Assist
3.	Measure BP for progress toward goal	Perform	Perform Supervise	Perform	Perform	Perform	Perform
4.	Conduct followup history/physical	None	Perform Supervise	Perform Assist* Perform Perform**	None	None	None
5.	Help patient to improve compliance	Perform	Supervise Assist	Perform Refer	Perform	Perform	Perform
6.	Ascertain resolution of psychosocial stress	None	Assist Refer	Perform Refer	None	None	None
7.	Followup on dropouts and fadeouts	None	Supervise	Perform	None	None	None
8.	Counsel patient on distinction between "control" and "cure"	Perform	Perform Supervise	Perform	None	Perform	Perform
9.	Counsel patient on distinction between "nervous tension" and hypertension	Perform	Perform Supervise	Perform	None	Perform	Perform

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* Per doctor's orders.
** Suggested role for extended role nurse.

SETTING: SOLO

Function 15. Subobjective: To continue to adjust therapy (as desirable)

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Adjust drug dosage	Refer	Perform Consult	Refer	Refer	Refer	Refer
2.	Encourage and support adjunctive lifestyle changes	None	Assist Refer	Perform	None	None	None
3.	Establish followup date and method	None	Perform Consult	Perform	None	None	None

PRACTICE SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 1. Subobjective: To measure blood pressure

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Measures blood pressure accurately in a manner consistent with scientific principles						
a.	Provides a quiet environment	Supervise	Supervise Perform	Supervise	Supervise	Supervise Perform	Supervise
b.	Positions patient and equipment properly	Supervise	Supervise Perform	Supervise	Supervise	Supervise Perform	Supervise
c.	Palpates pulse prior to auscultating	Supervise	Supervise Perform	Supervise	Refer	Supervise Perform	Supervise
d.	Takes blood pressure in more than one extremity and/or position when indicated	Perform Refer	Supervise Perform	Supervise	Supervise Perform	Supervise Perform	Supervise Refer
e.	Communicates orally and in writing significant information to other health team members	Perform Supervise	Supervise Perform	Supervise	Perform	Supervise Perform	Perform
f.	Records diastolic findings according to recommendations of American Heart Association	Supervise	Supervise Perform	Supervise	Perform	Supervise Perform	Supervise

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 2. Subobjective: To determine if blood pressure is elevated

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Recheck blood pressure	Supervise	Perform Supervise	Perform Supervise	Supervise Perform	Perform	Supervise
2.	Calculate average values	None	Perform Supervise	Perform Supervise	Perform	Perform	None
3.	Utilize age/BP table to determine recommended action	None	Perform Supervise	Assist Perform Supervise	Assist	Perform	None
4.	Inform patient of readings and the recommended actions	Supervise Refer	Perform Supervise	Assist Perform Supervise	Assist	Perform	Supervise Refer

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 3. Subobjective: To refer to diagnosis if elevated

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Contact provider who will diagnose	Supervise Refer	Perform Supervise	Supervise Perform	Perform Supervise	Perform Supervise*	Supervise Refer
2. Make appointment	Refer Assist	Refer Assist	Supervise Perform	Perform Supervise	Perform Supervise	Refer Assist
3. Followup to confirm kept appointment	Supervise	Supervise	Supervise Perform	None	Perform** Supervise	Supervise
4. Followup examinees not making or keeping appointments	Assist	Supervise	Supervise Perform	Supervise	Supervise Perform	Assist
4a. Note action in record	Perform	Perform	Supervise Perform	Perform	Supervise Perform	Perform

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* To be done on a routine basis.

** Only in life-threatening situations.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 4. Subobjective: To take patient history and conduct physical and lab tests

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Conduct patient interview (history)	Supervise Perform	Supervise Perform	Perform Assist Supervise	To be determined	Perform**	Supervise Perform
2.	Examine fundi	None	Supervise Perform	None*		None	None
3.	Examine heart	None	Supervise Perform	None*		None	None
4.	Examine peripheral pulses	Supervise	Supervise Perform	Perform Supervise		None	Perform
5.	Recognize findings that suggest secondary forms of hypertension	Refer	Supervise Perform	None*		Refer	Refer

---

* Extended role nurse may have a role in some settings. This must be defined.

** Drug history only.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 5. Subobjective: Evaluate and diagnose correctly

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Interpret basic studies	None	Perform	Assist	None	Consult Assist	None
2. Order and interpret special studies	None	Perform	Assist	None	Consult Assist	None
3. Evaluate findings and diagnose	None	Perform	Assist	None	Consult Assist	None
4. Explain findings and nature of HBP control to patient	None	Perform	Perform Assist	None	Perform	None

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* Drug studies only.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 6. Subobjective: To refer to therapy

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Refer patient	Assist	Consult Perform Supervise	Assist Perform Supervise	None	Perform	Perform Assist
2. Establish tickler to followup referrals	None	Assist Supervise Consult	Supervise Perform	None	Perform	None
3. Followup referred patients who did not report	Assist	Supervise Consult	Supervise Perform	None	Perform	Assist

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 7. Subobjective: To initiate therapy

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Set goal for BP reduction	None	Consult Perform Supervise	Assist	None	Assist Consult	None
2.	Develop treatment plan (e.g., stepped care)	None	Supervise Perform Consult	Assist	None	Assist Consult	None
3.	Educate patients re: HBP its complications, importance of therapy, potential compliance difficulties	Assist	Assist Perform Supervise	Supervise Perform Assist Refer	Assist	Perform Assist Consult	Assist
4.	Recommend adjunctive measures	None	Supervise Perform Consult	Perform Assist	None	Assist Consult	None
5.	Help alleviate pathogenic psychosocial stress	Assist	Perform Refer Supervise Consult	Supervise Perform Assist Refer	Assist	Refer	Assist
6.	Identify behavioral aids (e.g., biofeedback, meditation, etc.)	None	Consult Refer Perform Supervise	Perform Refer Assist	None	Refer	None
7.	Handle HBP emergencies	Refer Assist	Consult Perform Supervise	Assist Consult Refer	Perform	Assist Consult Refer	Refer Assist
8.	Prescribe medication	Assist	Perform	None	None	Assist Consult	Assist

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 8. Subobjective: To fill prescription

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Consider possible drug interactions	Assist	Perform Assist	Consult	None	Perform	Assist
2.	Instruct patient	Assist	Supervise Perform Assist	Perform Supervise	None	Perform	Assist
3.	Consider adverse reactions	Assist	Perform Assist	Perform Consult	None Assist	Perform	Assist
4.	Consider efficacy of drugs	None	Perform Assist Consult	Assist	None	Perform	Assist
5.	Dispense medication	None	Perform Refer Assist	None	None	Perform	Assist
6.	Establish medication records	Assist	Supervise Perform	None	None	Perform	Assist
7.	Establish followup date with patient	Assist	Perform Supervise	Assist	None	Perform	Assist

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*If no other professionals are available.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 8A. Subobjective: To continue to provide other services (e.g., diet counseling, meditation, etc.)

		Dentistry	Medicine	Nursing	Optometry	Pharmacy*	Podiatry
1.	Refer to service	Assist	Supervise Perform	Perform Supervise Consult	Refer	Assist	Assist
2.	Agree on goals	None	Perform Consult	Perform Consult	Refer	Assist	None
3.	Include family and others in support system	Assist	Assist Perform Supervise	Perform Supervise Consult	Refer	Assist	Assist
4.	Provide service	Assist	Consult Refer Perform Supervise	Perform Consult	Refer	Assist	Assist

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*Clinical pharmacist would be involved as member of health care team.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Take medication	Assist	Assist Supervise	Supervise Assist	Assist	Assist	Assist
2.	Change elements of life-style	None	Refer Assist Consult	Supervise Assist	None	Refer	Assist
3.	Follow behavioral approaches as aids in control	None	Consult Assist Refer	Supervise Assist	Assist	Refer	None

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 10. Subobjective: To monitor prescribed therapy

		Dentistry	Medicine	Nursing	Optometry	Pharmacy***	Podiatr
1.	Organize return visits program	None	Supervise Perform	Supervise Assist Perform	None	Perform	None
2.	Ascertain side effects problems	Assist	Supervise Perform Assist	Supervise Assist Perform	None	Perform	Assist
3.	Measure BP for progress toward goal	Assist	Perform Supervise	Supervise Assist Perform	Assist	Perform	Assist
4.	Conduct followup history/physical	None	Assist Perform Supervise	Perform Assist Supervise Perform* Refer* Supervise*	None	Perform	None
5.	Help patient to improve compliance	Assist	Refer Assist Supervise Perform	Perform Refer	Assist Perform	Perform	Assist
6.	Ascertain resolution of psychosocial stress	None	Consult Assist Refer Perform	Refer	Assist	Perform	None
7.	Followup dropouts and fadeouts	Assist	Refer Supervise	Supervise Assist Perform	Assist	Perform	Assist

(continued)

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
8.	Counsel patient on distinction between "control" and "cure"	Assist	Assist Perform	Perform	None**	Perform	Assist
9.	Counsel patient on distinction between "nervous tension" and hypertension	Assist	Perform Assist Supervise	Consult Perform Refer	None**	Perform	Assist

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* Suggested role for extended role nurse.

** More information needed to make definitive decision.

***Suggested role for clinical pharmacist.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 11. Subobjective: To adjust therapy (as desirable)

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Adjust drug dosage	None	Perform Supervise Consult	None	None	Perform Consult*	None
2. Obtain adjunctive lifestyle changes	None	Assist Perform Consult	Perform Assist Consult	None	Perform Consult	None
3. Establish followup date and method	None	Perform Assist Supervise	Perform Supervise Assist	None	Perform Consult*	None

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*Dependent upon latitude given by the institution, a clinical pharmacist may be assigned some of these responsibilities as a member of a health care team.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 12. Subobjective: To continue to fill prescription

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Consider possible drug interactions	Assist	Perform Consult	Consult Refer	None	Perform	Assist
2.	Instruct patient	Assist	Supervise Consult Assist Perform	Perform	Assist	Perform	Assist
3.	Consider adverse reactions	Assist	Perform Consult	Perform Consult*	None	Perform	Assist
4.	Consider efficacy of drugs	Assist	Perform Consult	Assist	Assist	Perform	Assist
5.	Dispense medication	None	Perform	None	None	Perform	Assist
6.	Establish medication records	Assist	Supervise Perform	None	None	Perform	Assist
7.	Establish followup date with patient	Assist	Perform Supervise	Consult Perform Supervise	None	Perform	Assist

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*If no other professionals are available.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

		Dentistry	Medicine	Nursing	Optometry	Pharmacy*	Podiatry
1.	Refer to service	Assist	Supervise Perform	Perform Supervise Consult	Refer	Assist	Assist
2.	Agree on goals	None	Perform Consult	Perform Consult	Refer	Assist	None
3.	Include family and others in support system	Assist	Assist Perform Supervise	Perform Supervise Consult	Refer	Assist	Assist
4.	Provide service	Assist	Consult Refer Perform Supervise	Perform Consult	Refer	Assist	Assist

*Clinical pharmacist would be involved as member of health care team.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed

	Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1. Take medication	Assist	Assist	Supervise Assist	Assist	Assist	Assist
2. Change elements of lifestyle	None	Supervise Assist	Supervise Assist Consult	None	None	Assist
3. Follow behavioral approaches as aids in control	None	Consult Supervise Assist	Supervise Assist	Assist	None	Assist

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 14. Subobjective: To continue to monitor prescribed therapy

		Dentistry	Medicine	Nursing	Optometry	Pharmacy***	Podiatry
1.	Organize return visits program	None	Supervise Perform	Supervise	None	Perform	None
2.	Ascertain side effects problems	Assist	Assist Supervise Perform	Supervise Perform	Assist	Perform	Assist
3.	Measure BP for progress toward goal	Assist	Consult Perform Supervise	Supervise Perform Consult	Perform Assist	Perform	Assist
4.	Conduct followup history/physical	None	Assist Perform Supervise	Perform Assist Perform* Refer*	None	Perform	None
5.	Help patient to improve compliance	Assist	Perform Assist Consult	Perform Refer	Assist	Perform	Assist
6.	Ascertain resolution of psychosocial stress	None	Perform Assist Refer	Refer	None	Perform	Assist
7.	Followup on dropouts and fadeouts	Assist	Assist Supervise	Supervise	None	Perform	Assist
8.	Counsel patient on distinction between "control" and "cure"	Assist	Assist Perform Supervise	Perform	None**	Perform	Assist
9.	Counsel patient on distinction between "nervous tension" and hypertension (HBP)	Assist	Perform Assist Supervise	Perform Refer	None**	Perform	Assist

(continued)

* Suggested role for extended role nurse.

** More information needed to make definitive decision.

***Suggest role for clinical pharmacist.

SETTING: COMMUNITY HEALTH CENTER/HEALTH MAINTENANCE ORGANIZATION

Function 15. Subobjective: To continue to adjust therapy (as desirable)

		Dentistry	Medicine	Nursing	Optometry	Pharmacy	Podiatry
1.	Adjust drug dosage	None	Supervise Perform Consult	None	None	Perform Consult	None
2.	Obtain adjunctive lifestyle changes	None	Supervise Assist Refer	Perform Consult	None	Perform Consult	None
3.	Establish followup date and method	None	Supervise Perform Consult	Supervise Assist Perform	None	Perform Consult	None

PRACTICE SETTING: HOSPITAL*

Function 1. Subobjective: To measure blood pressure

		Dentistry	Medicine	Nursing		Pharmacy	Podiatry
				OPD	ER		
1.	Measures blood pressure accurately in a manner consistent with scientific principles						
a.	Provides a quiet environment	Perform Supervise	Supervise Perform	Supervise	Perform Supervise	Supervise Perform	Perform Supervise
b.	Positions patient and equipment properly	Perform Supervise	Supervise Perform	Supervise	Perform Supervise	Supervise Perform	Perform Supervise
c.	Palpates pulse prior to auscultating	Perform Supervise	Supervise Perform	Supervise	Perform Supervise	Supervise Perform	Perform Supervise
d.	Takes blood pressure in more than one extremity and/or position when indicated	Perform Supervise Refer	Supervise Perform	Supervise	Perform Supervise	Supervise Perform	Perform Supervise Refer
e.	Communicates orally and in writing significant information to other health team members	Perform Supervise	Supervise Perform	Supervise	Perform Supervise	Supervise Perform	Perform Supervise
f.	Records diastolic findings according to recommendations of American Heart Association	Perform Supervise	Supervise Perform	Supervise	Perform Supervise	Supervise Perform	Perform Supervise

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*A recommended role for optometrists was not developed for this setting.

SETTING: HOSPITAL

Function 2. Subobjective: To determine if blood pressure is elevated

			Nursing			
	Dentistry	Medicine	OPD	ER	Pharmacy*	Podiatry
1. Recheck blood pressure	Perform Supervise	Perform Supervise	Perform	Perform	Perform	Perform Supervise
2. Calculate average values	Supervise Refer	Perform Supervise	Perform	Perform	Perform	Supervise Refer
3. Utilize age/BP table to determine recommended action	Supervise Perform	Perform Supervise	Assist	Assist	Perform	Supervise Refer
4. Inform patient of readings and the recommended actions	Supervise Refer	Perform Supervise	Assist	Assist	Perform	Supervise Refer

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*Role will depend upon their responsibilities within health care team.

SETTING: HOSPITAL

Function 3. Subobjective: To refer to diagnosis if elevated

				Nursing			
		Dentistry	Medicine	OPD	ER	Pharmacy	Podiatry
1.	Contact provider who will diagnose	Perform Supervise	Perform Supervise	Perform	Supervise	Perform Supervise (routinely)	Perform Supervise
2.	Make appointment	Refer Assist	Supervise	Supervise	Supervise	Perform	Refer Assist
3.	Followup to confirm kept appointment	Perform Supervise	Supervise	Perform	Refer Consult	Perform* Supervise	Perform Supervise
4.	Followup examinees not making or keeping appointments	Assist Perform	Supervise	Perform	Refer Consult	Supervise Perform	Assist Perform
4a.	Note action in record	Perform	Perform	Perform	Perform	Supervise Perform	Perform

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*Only in life threatening situations

SETTING: HOSPITAL

Function 4. Subobjective: To take patient history and conduct physical and lab tests

				Nursing			
		Dentistry	Medicine	OPD	ER	Pharmacy	Podiatry
1.	Conduct patient interview (history)	Perform	Supervise Perform	Perform Assist	Perform Assist	Perform* (drug hx only)	Perform
2.	Examine fundi	None	Supervise Perform	None*	None*	None	None
3.	Examine heart	None	Supervise Perform	None*	None*	None	None
4.	Examine peripheral pulses	Perform	Supervise Perform	None*	None*	None	Perform
5.	Recognize findings that suggest secondary forms of hypertension	Perform Refer	Supervise Perform	None* Refer	None* Refer	Refer	Perform Refer

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* Extended role nurse may have a role in some settings. This must be defined.

**Only a clinical pharmacist would take such a history in accord with institutional rules. A clinical pharmacist may provide consultation regarding drugs taken by a patient and any significant probable impact on lab test results.

SETTING: HOSPITAL

Function 5. Subobjective: Evaluate and diagnose correctly

	Dentistry	Medicine	Nursing		Pharmacy	Podiatry
			OPD	ER		
1. Interpret basic studies	None	Supervise Perform	Assist	Assist	Consult Assist*	None
2. Order and interpret special studies	None	Supervise Perform	Assist	Assist	Consult Assist*	None
3. Evaluate findings and diagnose	None	Supervise Perform	Assist	Assist	Consult Assist	None
4. Explain findings and nature of HBP control to patient	None	Perform	Perform Assist	Perform Assist	Perform	None

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*Drug studies only.

SETTING: HOSPITAL

Function 6. Subobjective: To refer to therapy

				Nursing			
		Dentistry	Medicine	OPD	ER	Pharmacy	Podiatry
1.	Refer patient	Perform	Perform	Perform Assist	Perform Assist	Perform	Perform
2.	Establish tickier to followup referrals	None	Supervise Consult	Supervise	Supervise	Perform	None
3.	Followup referred patients who did not report	Perform	Supervise Consult	Perform Assist	Supervise Perform	Perform	Perform

SETTING: HOSPITAL

Function 7. Subobjective: To initiate therapy

	Dentistry	Medicine	Nursing		Pharmacy	Podiatry
			OPD	ER		
1. Set goal for BP reduction	None	Perform	Assist	Assist	Assist Consult	None
2. Develop treatment plan (e.g., stepped care)	None	Perform Consult	Assist	Assist	Assist Consult	None
3. Educate patients re: HBP its complications, importance of therapy, potential compliance difficulties	None	Perform Supervise	Perform Assist Refer	Perform Assist Refer	Perform Assist Consult	Assist
4. Recommend adjunctive measures	None	Perform Consult	Perform Assist	Perform Assist	Assist Consult	None
5. Help alleviate pathogenic psychosocial stress	None	Refer	Perform Assist Refer	Perform Assist Refer	Refer	Assist
6. Identify behavioral aids (e.g., biofeedback, meditation, etc.)	None	Refer	Refer Assist	Refer Assist	Refer	None
7. Handle HBP emergencies	Refer Assist	Perform Supervise	Assist	Assist	Assist Consult Refer	Refer Assist
8. Prescribe medication	None	Perform	None	None	Assist Consult	None

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*Clinical pharmacist may be given role as part of health care team, in a given institution.

SETTING: HOSPITAL

Function 8. Subobjective: To fill prescription

		Dentistry	Medicine	Nursing		Pharmacy	Podiatry
				OPD	ER		
1.	Consider possible drug interactions	None	Perform	Consult	Consult	Perform	None
2.	Instruct patient	None	Supervise Perform	Perform	Perform	Perform	None
3.	Consider adverse reactions	None	Perform	Perform Consult*	Perform Consult*	Perform	None
4.	Consider efficacy of drugs	None	Perform	Assist	Assist	Perform	None
5.	Dispense medication	None	Perform	None	None	Perform	None
6.	Establish medication records	None	Supervise Perform	None	None	Perform	None
7.	Establish followup date with patient	None	Perform	None	None	Perform	None

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*If no other professionals are available

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)

				Nursing			
		Dentistry	Medicine	OPD	ER	Pharmacy	Podiatry
1.	Refer to service	None	Supervise Perform	Perform	Perform	Assist*	None
2.	Agree on goals	None	Perform	Perform	Perform	Assist*	None
3.	Include family and others in support system	Assist	Assist	Perform	Perform	Assist*	Assist
4.	Provide service	Assist	Refer	Perform	Perform	Assist*	Assist

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*Clinical pharmacist would be involved as member of health care team.

SETTING: HOSPITAL

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed

				Nursing			
		Dentistry	Medicine	OPD	ER	Pharmacy	Podiatry
1.	Take medication	Assist	Assist	Supervise Assist	Supervise Assist	Assist	Assist
2.	Change elements of life-style	None	Assist	Refer Assist	Refer Assist	Refer	None
3.	Follow behavioral approaches as aids in control	None	Assist Refer	Refer Assist Supervise	Refer Assist Supervise	Refer	None

SETTING: HOSPITAL

Function 10. Subobjective: To monitor prescribed therapy

			Nursing			
	Dentistry	Medicine	OPD	ER	Pharmacy	Podiatry
1. Organize return visits program	None	Supervise Perform	Supervise	Supervise	Perform*	None
2. Ascertain side effects problems	Assist	Supervise Perform	Perform	Perform	Perform*	Assist
3. Measure BP for progress toward goal	Assist	Perform Supervise	Perform Supervise	Perform Assist	Perform*	Assist
4. Conduct followup history/physical	None	Perform Supervise	Perform(HX) Assist(PHY) Perform(HX)** Perform(PHY)**	Perform(HX) Assist(PHY) Perform(HX)** Perform(PHY)**	Perform*	None
5. Help patient to improve compliance	Assist	Assist	Perform Refer	Perform Refer	Perform*	Assist
6. Ascertain resolution of psychosocial stress	None	Assist Refer	Refer	Refer	Perform*	Assist
7. Followup on dropouts and fadeouts	Assist	Supervise	Perform	Supervise Perform	Perform*	Assist
8. Counsel patient on distinction between "control" and "cure"	Assist	Perform	Perform	Supervise Perform	Perform*	Assist
9. Counsel patient on distinction between "nervous tension" and hypertension	Assist	Perform Supervise	Refer Perform	Supervise Perform	Perform*	Assist

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*Involvement of clinical pharmacist will depend upon policies and procedures of the institution. It is possible that in some institutions, the clinical pharmacist might be responsible for monitoring a group of patients.

**Suggested role for the extended role nurse.

SETTING: HOSPITAL

Function 11. Subobjective: To adjust therapy (as desirable)

	Dentistry	Medicine	Nursing OPD	Nursing ER	Pharmacy	Podiatry
1. Adjust drug dosage	None	Perform Consult	None**	None**	Perform Consult*	None
2. Obtain adjunctive lifestyle changes	None	Assist Refer	Perform Refer	Perform Refer	Perform Consult*	None
3. Establish followup date and method	None	Perform Consult	Perform	Supervise Perform	Perform Consult*	None

*Dependent upon latitude given by the institution, a clinical pharmacist may be assigned some of these responsibilities as a member of a health care team.

**Extended role nurse may have a role in some settings. This must be defined.

SETTING: HOSPITAL

Function 12. Subobjective: To continue to fill prescription

				Nursing			
		Dentistry	Medicine	OPD	ER	Pharmacy	Podiatry
1.	Consider possible drug interactions	None	Perform	Consult	Consult	Perform	None
2.	Instruct patient	None	Supervise Perform	Perform	Perform	Perform	None
3.	Consider adverse reactions	None	Perform	Perform Consult*	Perform Consult*	Perform	None
4.	Consider efficacy of drugs	None	Perform	Assist	Assist	Perform	None
5.	Dispense medication	None	Perform	None	None	Perform	None
6.	Establish medication records	None	Supervise Perform	None	None	Perform	None
7.	Establish followup date with patient	None	Perform	None	None	Perform	None

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*If no other professionals are available.

SETTING: HOSPITAL

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

				Nursing			
		Dentistry	Medicine	OPD	ER	Pharmacy	Podiatry
1.	Refer to service	None	Supervise Perform	Perform	Perform	Assist*	None
2.	Agree on goals	None	Perform	Perform	Perform	Assist*	None
3.	Include family and others in support system	Assist	Assist	Perform	Perform	Assist*	Assist
4.	Provide service	Assist	Refer	Perform	Perform	Assist*	Assist

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*Clinical pharmacist would be involved as member of health care team.

SETTING: HOSPITAL

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed

	Dentistry	Medicine	Nursing		Pharmacy	Podiatry
			OPD	ER		
1. Take medication	Assist	Assist	Supervise Assist	Supervise Assist	Assist	Assist
2. Change elements of lifestyle	None	Assist	Refer Assist	Refer Assist	None	None
3. Follow behavioral approaches as aids in control	None	Assist Refer	Refer Assist Supervise	Refer Assist Supervise	None	Assist

SETTING: HOSPITAL

Function 14. Subobjective: To continue to monitor prescribed therapy

		Dentistry	Medicine	Nursing		Pharmacy	Podiatry
				OPD	ER		
1.	Organize return visits program	None	Supervise Perform	Supervise	Supervise Perform	Perform*	None
2.	Ascertain side effects problems	Assist	Supervise Perform	Perform	Perform	Perform*	Assist
3.	Measure BP for progress toward goal	Assist	Perform Supervise	Perform Supervise	Perform Supervise	Perform*	Assist
4.	Conduct followup history/physical	None	Perform Supervise	Perform(HX) Assist(PHY) Perform(HX)** Perform(PHY)**	Perform(HX) Assist(PHY) Perform(HX)** Perform(PHY)**	Perform*	None
5.	Help patient to improve compliance	Assist	Assist	Perform Refer	Perform Refer	Perform*	Assist
6.	Ascertain resolution of psychosocial stress	None	Assist Refer	Refer	Refer	Perform*	Assist
7.	Followup on dropouts and fadeouts	Assist	Supervise	Perform	Supervise Perform	Perform*	Assist
8.	Counsel patient on distinction between "control" and "cure"	Assist	Perform	Perform	Supervise Perform	Perform*	Assist
9.	Counsel patient on distinction between "nervous tension" and hypertension	Assist	Perform Supervise	Refer Perform	Refer Perform	Perform*	Assist

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* Involvement of clinical pharmacist will depend upon policies and procedures of the institution. It is possible that in some institutions, the clinical pharmacist might be responsible for monitoring a group of patients.

**Suggested role for the extended role nurse.

SETTING: HOSPITAL

Function 15. Subobjective: To continue to adjust therapy (as desirable)

	Dentistry	Medicine	Nursing		Pharmacy	Podiatry
			OPD	ER		
1. Adjust drug dosage	None	Perform Consult	Perform	Perform	Perform Consult*	None
2. Encourage and support adjunctive lifestyle changes	None	Assist Refer	Perform Refer	Perform Refer	Perform Consult*	None
3. Establish followup date and method	None	Perform Consult	Perform	Supervise Perform	Perform Consult*	None

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*Dependent upon latitude given by the institution, a clinical pharmacist may be assigned some of these responsibilities as a member of a health care team.

SETTING: GROUP

Function 1. Subobjective: To measure blood pressure

	Medicine	Optometry
1. Measures blood pressure accurately in a manner consistent with scientific principles.		
a. Provides a quiet environment.	Supervise Perform	Supervise
b. Positions patient and equipment properly.	Supervise Perform	Supervise
c. Palpates pulse prior to auscultating.	Supervise Perform	Refer
d. Takes blood pressure in more than one extremity and/or position when indicated.	Supervise	Supervise
e. Communicates orally and in writing significant information to other health team members.	Supervise Perform	Perform
f. Records diastolic findings according to recommendations of American Heart Association	Supervise	Perform

SETTING: GROUP

Function 2. Subobjective: To determine if blood pressure is elevated

		Medicine	Optometry
1.	Recheck blood pressure	Perform Supervise	Supervise Perform
2.	Calculate average values	Perform Supervise	Perform
3.	Utilize age/BP table to determine recommended action	Perform Supervise	Perform Assist
4.	Inform patient of readings and the recommended actions	Perform Supervise	Assist

SETTING: GROUP

Function 3. Subobjective: To refer to diagnosis if elevated

		Medicine	Optometry
1.	Contact provider who will diagnose	Perform Supervise	Perform
2.	Make appointment	Refer Assist	Perform Supervise
3.	Followup to confirm kept appointment	Supervise	Perform
4.	Followup examinees not making or keeping appointments	Supervise	Supervise
4a.	Note action in record	Perform	Perform

SETTING: GROUP

Function 4. Subobjective: To take patient history and conduct physical and lab tests

		Medicine	Optometry
1.	Conduct patient interview (history)	Supervise Perform	To be determined
2.	Examine fundi	Supervise Perform	
3.	Examine heart	Supervise Perform	
4.	Examine peripheral pulses	Supervise Perform	
5.	Recognize findings that suggest secondary forms of hypertension	Supervise Perform	

SETTING: GROUP

Function 5. Subobjective: Evaluate and diagnose correctly

		Medicine	Optometry
1.	Interpret basic studies	Perform	None
2.	Order and interpret special studies	Perform	None
3.	Evaluate findings and diagnose	Perform	None
4.	Explain findings and nature of HBP control to patient	Supervise Perform	None

Function 6. Subobjective: To refer to therapy

	Medicine	Optometry
1. Refer patient	Perform	None
2. Establish tickler to followup referrals	Supervise Consult	None
3. Followup referred patients who did not report	Supervise Consult	None

SETTING: GROUP

Function 7. Subobjective: To initiate therapy

		Medicine	Optometry
1.	Set goal for BP reduction	Perform	None
2.	Develop treatment plan (e.g., stepped care)	Perform Consult	
3.	Educate patient re: HBP, its complications, importance of therapy, potential compliance difficulties	Perform Supervise	Assist
4.	Recommend adjunctive measures	Perform Consult	None
5.	Help alleviate pathogenic psychosocial stress	Refer	Assist
6.	Identify behavioral aids (e.g., biofeedback, meditation, etc.)	Refer	None
7.	Handle BHP emergencies	Perform Supervise	Perform
8.	Prescribe medication	Perform	None

SETTING: GROUP

Function 8. Subobjective: To fill prescription

		Medicine	Optometry
1.	Consider possible drug interactions	Perform	None
2.	Instruct patient	Supervise Perform	None Assist
3.	Consider adverse reactions	Perform	None Assist
4.	Consider efficacy of drugs	Perform	None
5.	Dispense medication	Perform	None
6.	Establish medication records	Supervise Perform	None
7.	Establish followup date with patient	Perform	None

SETTING: GROUP

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, et

		Medicine	Optometry
1.	Refer to service	Supervise Perform	Refer Perform Consult
2.	Agree on goals	Perform	Assist
3.	Include family and others in support system	Assist	Perform Refer Consult
4.	Provide service	Refer	Perform Refer Consult

SETTING: GROUP

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed

	Medicine	Optometry
1. Take medication	Assist	Assist
2. Change elements of lifestyle	Assist	None
3. Follow behavioral approaches as aids in control	Assist Refer	Assist

SETTING: GROUP

Function 10. Subobjective: To monitor prescribed therapy

		Medicine	Optometry
1.	Organize return visits program	Supervise Perform	None
2.	Ascertain side effects problems	Supervise Perform	None
3.	Measure BP for progress toward goal	Perform Supervise	Assist Perform
4.	Conduct followup history/physical	Perform Supervise	None
5.	Help patient to improve compliance	Assist	Assist Perform
6.	Ascertain resolution of psychosocial stress	Assist Refer	Assist
7.	Followup on dropouts and fadeouts	Supervise	Assist
8.	Counsel patient on distinction between "control" and "cure"	Perform	Assist
9.	Counsel patient on distinction between "nervous tension" and hypertension	Perform Supervise	Assist

SETTING: GROUP

Function 11. Subobjective: To adjust therapy (as desirable)

		Medicine	Optometry
1.	Adjust drug dosage	Perform Consult	None
2.	Encourage and support adjunctive lifestyle changes	Assist Refer	Assist
3.	Establish followup date and method	Perform Consult	None

SETTING: GROUP

Function 12. Subobjective: To continue to fill prescription

		Medicine	Optometry
1.	Consider possible drug interactions	Perform	None
2.	Instruct patient	Supervise Perform	Assist
3.	Consider adverse reactions	Perform	None
4.	Consider efficacy of drugs	Perform	Assist
*5.	Dispense medication	Perform	None
**6.	Establish medication records	Supervise	None
7.	Establish followup date with patient	Perform	None

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* On urgent or emergency basis only and then only in accord with state laws regarding labeling. As a general rule, physicians should avoid dispensing medications for long-term use.

**Includes nurses notes.

SETTING: GROUP

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

		Medicine	Optometry
1.	Refer to service	Supervise Perform	Refer Perform Consult
2.	Agree on goals	Perform	Assist
3.	Include family and others in support system	Assist	Perform Refer Consult
4.	Provide service	Refer	Perform Refer Consult

SETTING: GROUP

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed

	Medicine	Optometry
1. Take medication	Assist	Assist
2. Change elements of lifestyle	Assist	Assist
3. Follow behavioral approaches as aids in control	Assist Refer	Assist

Function 14. Subobjective: To continue to monitor prescribed therapy

		Medicine	Optometry
1.	Organize return visits program	Supervise Perform	None
2.	Ascertain side effects problems	Supervise Perform	Assist
3.	Measure BP for progress toward goal	Perform Supervise	Perform Assist
4.	Conduct followup history/physical	Perform Supervise	None
5.	Help patient to improve compliance	Assist	Assist
6.	Ascertain resolution of psychosocial stress	Assist Refer	None
7.	Followup on dropouts and fadeouts	Supervise	None
8.	Counsel patient on distinction between "control" and "cure"	Perform	None
9.	Counsel patient on distinction between "nervous tension" and "hypertension"	Perform Supervise	None

SETTING: GROUP

Function 15. Subobjective: To continue to adjust therapy (as desirable)

	Medicine	Optometry
1. Adjust drug dosage	Perform Consult	None
2. Obtain adjunctive lifestyle changes	Assist Refer	None
3. Establish followup date and method	Perform Consult	None

PRACTICE SETTING: CHAIN*

Function 1. Subobjective: To measure blood pressure

		Pharmacy
1.	Measures blood pressure accurately in a manner consistent with scientific principles	
a.	Provides a quiet environment	Perform Supervise
b.	Positions patient and equipment properly	Perform Supervise
c.	Palpates pulse prior to auscultating	Perform Supervise
d.	Takes blood pressure in more than one extremity and/or position when indicated	Perform Supervise
e.	Communicates orally and in writing significant information to other health team members	Perform Supervise
f.	Records diastolic findings according to recommendations of American Heart Association	Perform Supervise

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*Dentistry, medicine, nursing, optometry and podiatry have no suggested role in this setting

SETTING: CHAIN

Function 2. Subobjective: To determine if blood pressure is evelvated

	Pharmacy
1. Recheck blood pressure	Perform Supervise
2. Calculate average values	Perform Supervise
3. Utilize age/BP table to determine recommended action	Perform Supervise
4. Inform patient of readings and the recommended actions	Perform Refer Consult Supervise

SETTING: CHAIN

Function 3. Subobjective: To refer to diagnosis if elevated

		Pharmacy
1.	Contact provider who will diagnose	Perform* Supervise
2.	Make appointment	Perform Refer Assist
3.	Followup to confirm kept appointment	Perform**
4.	Followup examinees not making or keeping appointments	None
4a.	Note action in record	Perform

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* The pharmacist or his assistant would perform this activity only in exceptional cases.

**Only in life-threatening situations.

SETTING: CHAIN

Function 4. Subobjective: To take patient history and conduct physical and lab tests

		Pharmacy
1.	Conduct patient interview (history)	Perform
2.	Examine fundi	None
3.	Examine heart	None
4.	Examine peripheral pulses	None
5.	Recognize findings that suggest secondary forms of hypertension	None

SETTING: CHAIN

Function 5. Subobjective: Evaluate and diagnose correctly

		Pharmacy
1.	Interpret basic studies	None
2.	Order and interpret special studies	None
3.	Evaluate findings and diagnose	None
4.	Explain findings and nature of HBP control to patient	None

SETTING: CHAIN

Function 6. Subobjective: To refer to therapy

	Pharmacy
1. Refer patient	None
2. Establish tickler to followup referrals	None
3. Followup referred patients who did not report	None

SETTING: CHAIN

Function 7. Subobjective: To initiate therapy

		Pharmacy
1.	Set goal for BP reduction	None
2.	Develop treatment plan (e.g., stepped care)	None
3.	Educate patient re: HBP, its complications, importance of therapy, potential compliance difficulties	Assist
4.	Recommend adjunctive measures	None
5.	Help alleviate pathogenic psychosocial stress	None
6.	Identify behavioral aids (e.g., biofeedback, meditation, etc.)	None
7.	Handle HBP emergencies	Refer Assist
8.	Prescribe medication	Consult

SETTING: CHAIN

Function 8. Subobjective: To fill prescription

		Pharmacy
1.	Consider possible drug interactions	Perform
2.	Instruct patient	Perform
3.	Consider adverse reactions	Perform
4.	Consider efficacy of drugs	Perform
5.	Dispense medication	Perform
6.	Establish medication records	Perform
7.	Establish followup date with patient	Perform

SETTING: CHAIN

Function 8A. Subobjective: To provide other services (e.g., diet counseling, meditation, etc.)

	Pharmacy
1. Refer to service	None
2. Agree on goals	None
3. Include family and others in support system	None
4. Provide service	None

SETTING: CHAIN

Function 9. Subobjective: (Patient) To follow through with therapy as prescribed

		Pharmacy
1.	Take medication	Assist
2.	Change elements of lifestyle	None
3.	Follow behavioral approaches as aids in control	None

SETTING: CHAIN

Function 10. Subobjective: To monitor prescribed therapy

		Pharmacy
1.	Organize return visits program	Assist
2.	Ascertain side effects problems	Assist Consult
3.	Measure BP for progress toward goal	Perform
4.	Conduct followup history/physical	None
5.	Help patient to improve compliance	Perform
6.	Ascertain resolution of psychosocial stress	None
7.	Followup on dropouts and fadeouts	None
8.	Counsel patient on distinction between "control" and "cure"	Perform
9.	Counsel patient on distinction between "nervous tension" and hypertension	Perform

SETTING: CHAIN

Function 11. Subobjective: To adjust therapy (as desirable)

		Pharmacy
1.	Adjust drug dosage	Refer
2.	Encourage and support adjunctive lifestyle changes	None
3.	Establish followup date and method	None

SETTING: CHAIN

Function 12. Subobjective: To continue to fill prescription

		Pharmacy
1.	Consider possible drug interactions	Perform
2.	Instruct patient	Perform
*3.	Consider adverse reactions	Perform
**4.	Consider efficacy of drugs	Perform
5.	Dispense medication	Perform
6.	Establish medication records	Perform
7.	Establish followup date with patient	Perform

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* Consult with the physician if there is concern on the part of the pharmacist.

**When medications are available from multiple sources and physician doesn't require a particular brand, pharmacist must dispense most efficacious.

SETTING: CHAIN

Function 12A. Subobjective: To continue to provide patient services related to adjunctive measures and behavioral approaches

	Pharmacy
1. Refer to service	None
2. Agree on goals	None
3. Include family and others in support system	None
4. Provide service	None

SETTING: CHAIN

Function 13. Subobjective: (Patient) To continue to follow through with therapy as prescribed

		Pharmacy
1.	Take medication	Assist
2.	Change elements of lifestyle	None
3.	Follow behavioral approaches as aids in control	None

SETTING: CHAIN

Function 14. Subobjective: To continue to monitor prescribed therapy

		Pharmacy
1.	Organize return visits program	Assist
2.	Ascertain side effects problems	Assist Consult
3.	Measure BP for progress toward goal	Perform
4.	Conduct followup history/physical	None
5.	Help patient to improve compliance	Perform
6.	Ascertain resolution of psychosocial stress	None
7.	Followup on dropouts and fadeouts	None
8.	Counsel patient on distinction between "control" and "cure"	Perform
9.	Counsel patient on distinction between "nervous tension" and "hypertension"	Perform

SETTING: CHAIN

Function 15. Subobjective: To continue to adjust therapy (as desirable)

		Pharmacy
1.	Adjust drug dosage	Refer
2.	Obtain adjunctive lifestyle changes	None
3.	Establish followup date and method	None

Appendix B

NBHPTF LEGISLATIVE RECOMMENDATIONS

1. The National Black Health Providers Task Force objectives and goals can be accomplished through the use of administrative procedures in the following manner. The Administration can mandate that all federally financed health care service entities which receive demonstration project grants establish model protocol and training programs along the lines recommended by NBHPTF. This requirement could also be a condition for the renewal of other DHEW demonstration contracts, and of the renewal of grants to community health centers.

   As part of this recommendation, it is anticipated that payment or any reimbursement schedule to the health provider by the Federal Government or a third-party intermediary payment source would include payment for blood pressure taking, education, etc.

   It has been well demonstrated and documented that the recommended blood pressure taking, education, etc., program, on a voluntary basis, may not get the full provider cooperation and participation needed to achieve the desired results and objectives of the National Black Health Providers Task Force. While cost containment in the health care field is a prime consideration in any program, it is only fair that a reasonable fee be allowed for the health professional's time consumed, space allocated, etc.

2. It is recommended that the NBHPTF consult with local Congressmen and Senators in an effort to initiate legislation which would coincide with administrative efforts and support to provide a system of coordinating consumer education and health services delivery components. Thus, funding could be provided by the Office of Health Promotion and Disease Prevention for the establishment of model projects for community-wide coordination systems with respect to hypertension. The possibility is further enhanced if the legislation were to provide funding to coordinate with other areas of concern such as hypertension and smoking. Congressional leadership and support for such an initiative is attainable.

3. Hypertension might be used by some employers to deny employment to an otherwise employable person, whether or not the hypertension is related to the job sought. This phenomenon further increases the unemployment of Blacks.

   It is recommended that the NBHPTF initiate support among Congressmen and support present pending legislation that would amend the Civil Rights Act to prohibit job discrimination on the basis of hypertension. Also, amendments to legislation regarding the handicapped which endorse and incorporate the goals and objectives of the NBHPTF should be supported.

4. It is recommended that all administrative procedures, rules, regulations, and legislation which support and endorse the recommendations of the NBHPTF provide for and safeguard the confidentiality and privacy of the medical records of all patient participants in the program. Every safeguard should be taken to see that this right of privacy of medical records is not abridged.

5. In all Federally financed and subsidized programs including demonstration and model projects which embody the NBHPTF recommendations, there should be scrupulous adherence to full disclosure and informed consent including continuation therapy for the participants. Further, these programs should incorporate and include a provision pertaining to malpractice insurance coverage in the case of professional negligence.

6. It is recommended that medical programs for the indigent such as Medicare, Medicaid, National Health Insurance, etc., provide Federal support for the treatment of high blood pressure.

7. It is recommended that health care providers including the paraprofessionals and extended health care providers review and keep current with legislation, statutes, and ordinances in their various states regarding the privileges and limitations circumscribing their individual and respective professions.

Appendix C

STATEMENT ON SOCIAL WORKER'S ROLE FROM THE NATIONAL ASSOCIATION OF BLACK SOCIAL WORKERS

In the National Black Health Providers Task Force's desire to examine the interdisciplinary efforts to detect and arrest hypertension it has consulted six of the disciplines which are traditionally thought of as the essential cadre. The modern trend in medicine is to broaden this definition of interdisciplinary teamwork to include social workers, and other allied health professions. Health care has moved into the arena of understanding the "totality and wholeness" of individuals. Without social work at least three potential paramount problems exist in the control of hypertension; prevention, detection and compliance. This presentation is twofold; 1) to define and stress the importance of interdisciplinary teamwork in patient care, and 2) to demonstrate the role of the clinical social worker in the prevention, detection and treatment of hypertension.

Interdisciplinary practice exists when there is sharing of information and interchange of professional knowledge. In order for this practice to be effective there must be a coordinated and nonepisodic effort toward the furthering of common objectives. The general goal of interdisciplinary practice in the health care field is the welfare of individuals, groups and communities being served.

Furthermore this goal must be placed above the particular interest and concerns of any one profession. For effective interdisciplinary teamwork, each member of the clinical team contributes jointly to the assessment and planning of patient care. When disciplines work together the contribution of each is enlarged and can lend to increased diagnostic accuracy.

To understand the clinical social worker's role in the care of the hypertensive patient it is important first to understand the role of the social worker in the health care setting. The clinical social worker works in a coordinated manner with members of the interdisciplinary team in the care of an individual patient. The clinical social worker is concerned with understanding the patient as a person and the patient's definition of his problems. The patient must be understood in relation to his illness, family, social relationships, and sociocultural milieu. Viewing the patient's illness in light of his environment (systems approach) is the unique contribution of the social work clinician. This understanding derives from interviews with the patient, communication with the medical staff, examination of the medical record, and observation of the patient's interactions to his sociocultural milieu. More specifically the social worker employs the psychosocial model. This model examines; 1) the meaning of illness to the patient, family and significant others, and 2) the social component in illness and medical care. In short, the social worker does not make a medical diagnosis or determine the medical treatment plan but does influence change in both.

There are at least three critical areas of concern for the social worker in the hypertension problem; 1) the discovery of the hypertensive patient, 2) the appropriate referral to the interdisciplinary team members and 3) followup assessment to assure compliance with antihypertensive drug regimens. The role of the clinical social worker with the hypertensive patient is presented in the context of the above highlighted concerns.

Many potential and asymtomatic hypertensives are frequent visitors to outpatient departments and social service department of acute care facilities. Oftentimes, these patients present problems other than hypertension. For example, members of the lower socioeconomic groups are least inclined to seek medical care unless symptoms are disabling. However, often they present initially to the social worker for assistance with social and emotional factors aggrevating their emotional and physical well-being. Here the social worker plays a key role in the discovery of a potential or asymptomatic hypertensive. The epidemiologic approach is utilized by the social work clinician. This methodology of the patient's evaluation allows the clinician to uncover the relationship of various factors and conditions which may be impacting upon the patient, thusly causing the patient to be a likely candidate for hypertension. Furthermore, this approach makes it possible for the social worker to take effective measures directed toward prevention, control or eradication of presenting potential problems. In sum, the primary role of the social worker is to apply an epidemiologic approach to the initial evaluation of the patient for appropriate referral to the interdisciplinary team members.

As mentioned, oftentimes the asymtomatic and potential hypertensive patient presented to the health care setting with problems that are crisis oriented and acutely disabling. When it is identified by the medical provider of care that psychosocial problems either are or may be interfering with prescribed treatment and compliance, the patient should be referred to the social work clinician. The role of the clinician centers around; 1) identifying with the patient psychosocial problems that are negatively affecting compliance with the prescribed plan of treatment, and 2) seeking means by which these problems can be eliminated or significantly reduced. Other salient factors to be identified include:

1) Income and its relationship to dietary budget planning,

2) Education level and learning capability,

3) Motivation level as reflected in work habits, general lifestyle, etc.,

4) Attitudes toward disease and health,

5) Identification of incidents of illness in the family and feelings about hypertension, and

6) Level of stress and stress factors in interpersonal relationships.

In conclusion, the importance of interdisciplinary teamwork cannot be overemphasized. Social workers and other allied health professionals must be involved in the examination of the patient as he exists in his total sociocultural setting. The contribution of the interdisciplinary team acts as a catalyst in the assessment, detection, and successful treatment of the hypertensive patient.

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Coordinator of Social/Mental Health Services
Department of Social and Mental Health Services
Community Group Health Foundation

483

Appendix D

LEGAL ISSUES

Throughout the deliberations of the NBHPTF, the National Bar Association representatives have identified legal issues which may be important in achieving interdisciplinary interaction and cooperation in high blood pressure education and control.

In summary, those issues identified for this development are:

A. The liability of nurses, physicians, and other medical practitioners. The liability of physician extenders and of pharmacists.

B. The definition and limitation of the roles of professionals, paraprofessional and physician extenders.

C. The lack of uniform definitive state requirements concerning the definition of roles and limitations of nurse practitioners and physician assistants.

D. The provision of continuous care for patients who have been diagnosed and treated in hypertension research programs which are terminated.

E. The provision of emergency care.

F. Establishment of research requirements.

We also see legal involvement in the legislative and licensing processes which affect the provision of health care and the providers of that care.

Appendix E

ACKNOWLEDGEMENTS

The members of the NBHPTF wish to give special recognition to the officers:

Dr. Arthur H. Coleman, chairperson, for his wisdom, leadership and understanding of the need to involve disciplines that are not traditionally included in policy decisions regarding health, e.g., the legal profession.

Dr. Donald Ware, cochairperson, for his insight, direction and dedication to the committment and charge of the task force. Without his vision this work may never have occurred.

Ophelia Long, R.N., vice chairperson, for her administrative and management skills, willingness to act as a primary coordinator for executive decisions of the task force and galvanizing the strong support of the participating organizations.

The officers give special acknowledgement to the staff of the task force:

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In addition, the NBHPTF acknowledges the following groups and individuals for their contributions.

1. For support of the initial concept of a National Black Health Care Providers Task Force and for his provision of staff resources and information to facilitate the work on the NBHPTF:

    - Dr. Robert I. Levy, Director, National Heart, Lung, and Blood Institute

    For support of the continuing efforts on the NBHPTF:

    - Dr. Mary Jane Jesse, former director, Division of Heart and Vascular Diseases, NHLBI; currently, professor of pediatric cardiology, University of Miami College of Medicine

    NIH

    - Dr. Thomas Malone, Deputy Director, National Institutes of Health

    - Dr. Seymour Perry, Associate Director for Human Resources and Social and Economic Services, Office of Science and Technology Policy, Executive Office of the President

NHLBI

- Mrs. Annie Collins, coordinator for Community Development, National High Blood Pressure Education Program, NHLBI
- Mrs. Juanita Cooke, director, Office of Special Concerns, NHLBI
- Ms. Marilyn Farrand (M.S.), nutritionist, Preventive Cardiology Branch, DHVD, NHBLI
- Ms. Cynthia Ford (M.S.), nutrition consultant, Preventive Cardiology Branch, DHVD, NHLBI
- Dr. William Friedewald, associate director, Clinical Applications and Prevention Program, DHVD, NHLBI
- Dr. Ronald G. Geller, formerly chief, Hypertension and Kidney Diseases Branch, DHVD, NHLBI
- Dr. George Hayden, program administrator, Research Training and Development Branch, DHVD, NHLBI
- Dr. Donald MacCanon, chief, Research Training and Development Branch, DHVD, NHLBI
- Mr. Thomas Thom (M.S.), statistician, Clinical Applications and Prevention Program, DHVD, NHLBI
- Dr. Gerald Payne, scientific project officer, High Blood Pressure Detection and Followup Program (HDFP), DHVD, NHLBI
- Mr. Graham W. Ward (M.P.H.), coordinator, National High Blood Pressure Education Program; chief, Health Education Branch, NHLBI
- Dr. James Ware, formerly mathematical statistician, Clinical Applications and Prevention Program, DHVD, NHLBI; currently assistant professor of mathematics, Harvard University
- Dr. Stephen M. Weiss, chief, Behavioral Medicine Branch, DHVD, NHLBI

3. For providing the NBHPTF with information regarding the scope and nature of governmental, industrial, academic and voluntary organizations in disease prevention and health promotion:

- Mr. Glenn Bennett, minority involvement specialist, American Heart Association
- Dr. Richard Butcher, past president, San Diego Affiliate, National Medical Association

- Dr. Anna Cherrie Epps, Tulane University Medical Center

- Mr. Frederick Foard, product manager, Smith, Kline and French

- Mr. John Kelso, deputy administrator, Health Services Administration (HSA), DHEW

- Mrs. Pauline Miles, assistant vice president, National Health Council

- Ms. Ada Paul (M.P.H.), chief of Hypertension Programs, American Heart Association

- Dr. Elijah Saunders, president, Maryland Affiliate, American Heart Association; chief of cardiology, Provident Hospital, Baltimore; chairman, Maryland High Blood Pressure Program Advisory Council; fellow, American College of Cardiology

- Ms. Florance Stroud (R.N.), chairperson, California Board of Quality Assurance

- Dr. George Tolbert (Deceased 1979), associate director, Bureau of Community Health Services, HSA, DHEW

- Dr. John Witte, medical director, Bureau of Health Education, Center for Disease Control, DHEW

4. For providing the NBHPTF with access to executives and information regarding current activites of foundations in the area of hypertension control. A special thanks to:

    - Ms. Margaret Mahoney, vice president, Robert Wood Johnson Foundation

    - Ms. Pauline Miles, assistant vice president, National Health Council

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    - Ms. Lucille Kantor, consultant, Albert and Mary Lasker Foundation
    - Mr. Henry Williams, chairman, Health Committee, 100 Black Men, New York City

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- Ms. Ame Bestup, National Council of Negro Women
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- Dr. Robert I. Brutsche, Assistant Surgeon General, U.S. Federal Prisons Health System
- Dr. Edmund Butts, regional director, Hemodialysis Program, Kaiser Medical Center, Los Angeles, California
- Ms. Michelle Y. Carroll, staff associate, program development, Blue Cross and Blue Shield Association
- Dr. W. Montague Cobb, NAACP
- Mr. James H. (Pat) Daugherty, acting director, Division of Organization Development, Bureau of Community Health Services (BCHS), HSA, DHEW
- Dr. Sylvester Davis, chairperson, Health Sub-Committee, Board of Trustees, National Association for the Advancement of Colored People
- Mr. Eugene Dickerson, imperial potentate, Ancient Egyptian Order of Mystic Shrine (Shriners)
- Dr. Lloyd Elam (and Staff), president, Meharry Medical College, Nashville, Tennessee
- Dr. Erwin France, former chairperson, National Foundation/ March of Dimes Task Force on Maternal and Infant Care; partner, Palmer, France, Greene and King, Ltd.
- Dr. Paul Haber, assistant chief medical director for professional services, Veterans Administration
- Dr. Carlessia Hussein, executive director, Santa Clara County Health Systems Agency, San Jose, California
- Ms. Andrea Jennings (M.A.), health care systems consultant, Chicago, Illinois

- Mr. Thom Jones, formerly project director, St. Francis Hospital, Peoria, Illinois; currently, legislative liaison, Illinois Department of Public Health
- Dr. Edward D. Martin, director, Bureau of Community Health Services, Assistant Surgeon General, USPHS
- Mr. Winston Moore, former director, Cook County Department of Correction (Chicago)
- Ms. Grace Myers (R.N.), administrative coordinator, Hypertension Screening and Treatment Program, Veterans Administration
- Dr. Lindrey Niles, associate dean, Howard University School of Communications
- Mr. Alan Omar, president, Elijah Muhammad Memorial Health Facility, Inc., World Community of Al-Islam in the West
- Mrs. Eldra Perry (R.N., N.P.), nurse practitioner, University of Tennessee at Memphis; nurse coordinator, Church and Community United to Fight Hypertension, Memphis, Tennessee
- Mr. Edward Pitt, director, Health and Social Welfare, National Urban League
- Dr. Samuel Rogers, director, Wayne Minor Community Health Center, Kansas City, Missouri
- Dr. Roy Schneider, commissioner of health, United States Virgin Islands
- Rev. Melvin C. Smith, pastor, Mt. Moriah East Baptist Church, Memphis, Tennessee; convenor, Church and Community United to Fight Hypertension, Memphis, Tennessee; Memphis High Blood Pressure Control Project
- Mr. W. Melvin Smith (M.B.A.), president, Michigan HMO Plans, Inc.
- Dr. Orlando Taylor, chairman, Department of Arts and Sciences, Howard University School of Communications
- Ms. Penelope Taylor, assistant executive director, National Office of Black Catholics
- Mr. Peter M. Thexton, actuary, Health Insurance Association of America

- Mr. James Webb, senior vice president, Health Care Services Corp. (HCSC) (Illinois Blue Cross and Blue Shield Plan); board member and former chairman of Committee on Special Populations, American Society of Actuaries; Chairman, HCSC Hypertension Study Group

- Dr. Aaron Wells, Ancient Egyption Orders of Mystic Shrine (Shriner)

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   - Dr. Oliver Foster, president-elect, California Podiatry Association; president, National Podiatry Association.

   - Dr. Dorothy Harrison, Howard University, Biofeedback Laboratory; Association of Black Psychologists

   - Dr. James Lassiter, past president, National Dental Association

   - Mrs. Jeanette Poindexter (R.N.), National Black Nurses Association (NBNA)

   - Mrs. Gloria Rookard (R.N., N.P.), national secretary, National Black Nurses Association; Visiting Nurses Association, Toledo, Ohio

   - Ms. Gerry Simmons (R.N., N.P.), Veterans Administration, Sepulveda, California

   - Mr. Wendell Wharton, board member, American Physician Assistants Association

   - Dr. Jasper Williams, Williams Clinic, Chicago; past president, National Medical Association

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   a. White House

   Domestic Policy Council Staff

   - Mr. Joseph Onek, associate director, Domestic Policy Staff, The White House

   - Dr. David Calkins, assistant director, Domestic Policy Staff, The White House. A specials thanks to Dr. Calkins for the coordination of this meeting

Office of the Special Assistant to the President of the United States

- Ms. Karen W. Zuniga, deputy to Louis Martin, Special Assistant to the President of the United States

b. DHEW Office of the Surgeon General, United States Public Health Service

- Dr. J. Michael McGinnis, Deputy Assistant Secretary for Health (Disease Prevention and Health Promotion)
- Dr. George I. Lythcott, Administrator, Health Services Administration, Assistant Surgeon General

c. Congressional

The Honorable Louis Stokes (Ohio), cochairperson, Health Committee, Congressional Black Caucus

d. Private

- Dr. Jesse Barber, president, National Medical Association
- Mr. Charles Davis, executive director, National Insurance Association
- Dr. Elijah Saunders, president, Maryland Affiliate, American Heart Association

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- Ms. Eleanor High, executive director, National Dental Association

- Mrs. Gloria Rookard (R.N., N.P.), national secretary, National Black Nurses Association

- Ms. Jackie Williams, National High Blood Pressure Education Program

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   - Mr. Joseph McLean, computer programmer, Baltimore, Maryland

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